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Spinoza: The Human Mind as an Understanding of the Nature of its Body

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Spinoza: The Human Mind as an Understanding of the Nature of its Body

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by

Antti Sakari Hiltunen

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ABSTRACT OF THE DISSERTATION

Spinoza: The Human Mind as an Understanding of the Nature of its Body

by

Antti Sakari Hiltunen

Doctor of Philosophy in Philosophy

University of California, Los Angeles, 2019

Professor John P. Carriero, Chair

The thesis of this dissertation is that Spinoza thinks the human mind is an understanding of the nature of its body. What that means is that the human mind is at its basic level a cognitive structure. The mind's basic operation and tendency is *understanding*, that is, the formation of true ideas. It does so by drawing upon from internal, intellectual resources inherent in the mind's basic cognitive structure. Now, in particular, Spinoza thinks that the mind's essential cognitive structure *is* a kind of an intellectual account of the causal operation of the human body, i.e. a rich and complex explanation (or better, a model) of the how and why the human body operates physiologically.

Spinoza's view is his solution to the Early Modern mind–body problem: what it is for the human mind to be united with this particular body? The premise of that problem is that mental activity is fundamentally different in kind from physiological activity. One

way to reach Spinoza's view is to consider his dissatisfaction with Descartes' famous view of the mind as a thinking being whose essence (and thus operative principle) is independent of its body (or any other body). In Descartes' view, then, the mind's basic, essential structure is only accidentally related to its body. Spinoza recognizes that Descartes' view requires an additional explanatory factor, the mind-body union, aside from the essences of the mind and the body. That third factor is what accounts for what it is for the human mind to be united to the human body. In Spinoza's view, the postulation of such a third factor is explanatorily empty. Thus, he rejects Descartes' view of the mind-body union, and also his view of the mind as it stands. For Spinoza thinks that the origin of difficulties in Descartes' view was the notion of the mind as an agent whose essence is independent of its body.

As a result, Spinoza thinks that the only way to work around that fundamental difference between mind and body is that the mind's basic cognitive structure expresses the nature of this particular body. This does not mean that the mind is made of matter. Instead, the formation of mental states in this mind proceeds and presupposes the mind's essential structure. That essential structure *is* an understanding of the physiological operations of this particular body. The mind-body union is, according to Spinoza, that the mind's essence is a cognitive expression of its body. That relation of cognitive expression is the same as the relation between an understanding and its subject matter.

The dissertation of Antti Sakari Hiltunen is approved.

Alexander Jacob Julius

Itay Neeman

John P. Carriero, Committee Chair

University of California, Los Angeles

2019

This work is dedicated to:

my wife, Sukkyoung,

my parents, Sirkku and Sakari,

and my brother, Ville.

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Introduction

In *the Ethics,* Spinoza famously maintained that the human mind is the idea of the human body. The goal of this dissertation is to provide an explanation of that view and its origins. The motivation behind Spinoza's thesis is to give a theoretical account of the nature of the human mind which explains how it is united with the human body.

The primary thesis of this dissertation is that Spinoza's mind *is* an idea in the sense that it is a cognitive model. The nature of the mind consists in its being an idea. Traditionally, philosophers have thought that ideas are merely items that the mind possesses. If one thinks that an idea is essentially an item *in* the mind, one is prone to think that the notion of a mind is explanatorily prior to the notion of an idea. In that way of thinking, the notion of an idea provides us only a limited explanatory tool to understand what the mind is.

Spinoza, in contrast, maintains that the notion of an idea—a cognitive act—is capable of greater explanatory work. He thinks that a complex cognition of the human body's operation is what constitutes the nature of the mind, and the relationship of the mind to its body is that of a cognition to its object.

The basic operative tendency of the mind can be summarized in the slogan: the mind lives the life of its body but cognitively. Whereas the bodily system is driven by its causal structure from one physiological state to another in such a way that the operation of the whole physiology remains stable, the operation of the mind is driven forward by causal thinking. The mind is a real-time cognitive model of the body's physiological

operation. The mind infers causally its future cognitive state from its present cognition of the body and its state.

How is the mind capable of doing this? Ideas are, according to Spinoza, acts of understanding. Spinoza's core thesis is that the mind *is itself* an act of understanding. The mind is as it were a single—but internally very complex— thought which has as its object the nature of the body. The body is a complex dynamical system of motive tendencies, and its nature consists in its overall causal structure, i.e. the invariant operations of a complex physiological structure. The gist of Spinoza's thesis is that the mind's essence has built into it an intellectual affirmation of the essence of a particular body. In other words, the mind's cognitive structure has a constitutive dependence on the causal structure of its body.

Spinoza advances a radical intellectualist view of the mind, its internal structure and its basic operations. The basic operation and tendency of the mind, according to Spinoza, is purely cognitive. By "purely cognitive", I mean that mental activity is, at its basic level, understanding. Understanding is the cognitive activity of grasping of the nature of an object. Grasping a nature involves more than just truth (in the sense of a correspondence between the thought and its object). An understanding of some nature must be internally structured so that it forms an *explanatory causal account* of how its object operates. Late we see this plays a central role in Spinoza's theory of the mind-body union.

All other functions of the mind, such as sense perception, appetites, will, and feelings are modes of that original operative tendency. Sense perception, for instance, is

according to Spinoza only a limited and derivative mode of understanding. We explain this in detail later in Chapter 3.

Spinoza is not an intellectualist in the Kantian sense where the role of the intellect is to categorize and filter perceptual data that is presented to the conscious awareness of the thinking subject. In the Kantian framework, the innate tools of the intellect are the general categories that organize that data. This Kantian way of the thinking about the intellect is perhaps more accessible to the modern reader. In order to avoid misinterpreting Spinoza's view of the human mind through the lens of our modern intuitions, it is imperative to carefully reflect on his conceptions of what ideas and understanding are. In Spinoza's view, the innate tools of understanding are more like internal models or explanations of how and why things happen as they do. The paradigmatic case of an idea is that it is a causal and explanatory account of the causal nature of its object. That is not primarily a matter of categorizing sensory information. Instead, Spinoza thinks that when the mind forms sensory perceptions, it involves a kind of an account, or innate understanding, of how its body operates.

Spinoza thinks that the mind's essential structure *is* a rich intellectual cognition of the invariant nature of the body. The human mind by nature *is* a cognitive activity whose internal structure forms an account of the operative structure of the human body. That cognitive essence, even though it is itself a cognition, is not consciously accessible to the mind itself. This is one of the reasons why the term "cognitive model" is suitable for describing Spinoza's view.

Consider, for instance, perceptions. They are modes of the cognitive model of the

nature of the human body. This explains why Spinoza says that sense perceptions are ideas of bodily states which involve *both* the nature of the human body and the nature of the body that is perceived. That is not an epistemological notion of discovery according to which the mind perceives its own body simultaneously when it perceives another body. Rather, it describes a mechanism of how a purely cognitive mind can perceive bodies.[1]

The mind perceives other bodies only because its innate cognitive resources constitute an understanding of the physiological operations of its body. This gives it the ability to read and interpret incoming information about the state of its body. Here, there is a correspondence between the capabilities of human physiology and the cognitive model of that physiology. The human body, due to its brain structure, is sensitive to the presence of external bodies. Physiological "images" of external bodies are patterns of changes in brain activity. Because the mind is an understanding of the body's nature, it is also a cognitive model of the *way* the brain is sensitive to the presence of external bodies.

It is natural to wonder how such a radically intellectualist view of the mind can explain feelings and appetites, and more fundamentally, what it is for the mind to be a living thing. If we suppose that Spinoza holds the view that the mind is a cognitive model of its body, then one would be easily led to conclude that it is a kind of detached and dispassionate observer of what happens to the body. To the contrary, I argue that there is a sense in which the mind itself is a self-regulative cognition, an organism of ideas. The

[1] Alternatively, we could think of the cognitive model of the body as an *ur-cognition of the human body* on which all cognitive states depend on—for *this* mind. More precisely, sense perceptions are *modes* of the ur-cognition of *this* body.

life and death of the mind depend on its affirmation of its body. The mind lives insofar as the ideas of its bodily state support the truth of causal conclusions drawn from the original affirmation of its body's existence. In other words, the mind as a model of its body lives in virtue of its cognitive resources.

Feelings are, then, not merely perceptions of changes in the body's well-being and causal power, but also changes in the cognitive power of the mind. Let me take one example. Whereas the physiological side of suffering consists in a disturbance and inhibition of bodily life-functions, mental suffering is a disruption and weakening of cognitive resources. The cognitive model of the body, when suffering, is less able to form ideas of bodily actions. This kind of cognitive suffering is a kind of ignorance, not of the body itself, but of the *way* the body has power to act on other things. A mind, whose body is greatly weakened, progresses towards a kind of cognitive helplessness where it can only barely form ideas of bodily activity. A mind with an optimally functioning body has the cognitive resources for forming a great variety of ideas of bodily actions and possesses a richer array of perceptions of bodily changes. This allows Spinoza to advance a highly intellectualist theory of affective states without basing his account on phenomenological qualities. Notice that it also follows that Spinoza is not a cognitivist about emotions in the traditional sense: Emotions are not intellectual judgments, that is, actions which *evaluate* perceptual information originating from the body. Rather, emotions and feelings are *changes* in cognitive power.

Finally, since the mind's essential cognitive structure is constituted by a causal of account of its body's nature, the mind-body union is intrinsic to the mind. This is another

way of saying that that the mind just *is* an understanding of its body. Spinoza's theory is in this sense an expression of pure rationalism[2], in the sense that one can intellectually understand what it is for this mind to be united to this body. That my mind is united to a particular body is intelligible from the account of what my mind is.

One should ask why Spinoza invented this kind of theory. The first half of the dissertation attempts to answer that question by providing a (partial) origin story by contrasting it with Descartes' view of the mind-body union. First, we argue that Descartes held what we call a two-agent view of the mind-body union. *The two-agent view* holds that the mind and body are both agentive in that they operate on separate causal principles. They are separate in the sense that they pursue their own projects which sometimes agree and sometimes oppose one another. The human body is an automaton whose natural tendency is the preservation and optimization of its life-functions. The mind has an entirely different agency, consisting of the intellect guided by the will. The mind pursues the good, e.g. God, understanding, generosity, and love; things which do not in their essence have anything to do with the nature of the body. Further, there is nothing in the mind's essence that ties it to a particular body. The function and structure of the intellect are universal, that is, there is no cognitive structure in the intellect which ties it to any particular body.

[2] Here I don't mean by rationalism the commitment to some abstract principle or logical rule, such as principle of sufficient reason. Instead, I take rationalism to consist of two beliefs: First, the understanding of the natures of things consists in understanding of how they causally operate and how they come to be. Second, there is an ultimate bedrock of understanding, a particular subject matter which we understand as such. That ultimate subject matter is what Spinoza calls the substance.

The two-agent view leads Descartes to a view of mind-body union where the union cannot be made intelligible solely on the basis of (or not determined by) the essences of the mind and the body alone. Rather, there needs to be some third explanatory factor which specifies what it is for this mind to be united to its body.

That third factor of the mind-body union is what grounds a communicative relationship between the mind and its body.

Let's take an example. In Descartes' view, when I decide to throw a ball of paper to a trash bin, there needs to be some real factor (external to the mind's nature) which unites that act of willing to a suitable pattern of activity in the brain whose behavioral expressions are the muscular motions of aiming and releasing the ball of paper at the right trajectory. The thinking being[3] by its nature does not innately "know how" to bring about that sequence of movements. This is why there needs to be something accidental to the mind that unites it to its body in specific ways.

Similarly, there needs to be communication from the body to the mind which teaches the mind what the body is doing and what it needs. A sensation of pain, according to Descartes, is a signal which teaches the mind that its body is not doing well. But because the mind is a separate agent from its body, the sensation of pain also has the function of *coaxing* the mental agent to help and guide the body's activity.

Descartes' communicative theory of the relationship between the mind and its

[3] This is a technical term which occurs in Descartes' *Meditations,* which means the mind as an independent causal source of thinking activities, i.e. the agent who possesses the universal intellect and the self-determining will. The corresponding Latin term is *res cogitans.*

body entails various symptoms and oddities which we discuss from Spinoza' critical point of view.

Spinoza thinks that Descartes conceived the mind's nature to be too different from its body. That is why Spinoza thought that there cannot be any explanatorily informative account of what it is for *this* Cartesian mind to be united to *this* body. That is why, according to Spinoza, Descartes had to posit God's providential decree as an explanatory backing for the mind–body union.

In Chapter 1, we explain Descartes' view of the mind–body union. For Descartes, human mind is an agent whose nature is independent of its body's nature. Descartes thinks that the thinking being has two main powers: the intellect and the will. The intellect is universal, that is, it does not involve any particular body in its structure or as its object. The will is, first, the self-determining power of choice and judgment. The second aspect of the will is that it is a pursuit of the good. In the second half of the chapter, we discuss what the mind-body union is and how the mind-body communication works. The objective here is to draw attention to features of Descartes' view with which Spinoza is uncomfortable.

In Chapter 2, we discuss Spinoza's criticism of Descartes' view of the mind-body union. The core criticism is that Descartes cannot give an explanatorily satisfying account of what it is for the mental agent to be at one with the bodily agent. Spinoza thinks that the original source of problems in Descartes' view of the mind–body union is the notion of a mind whose essence is independent of any particular body. In the latter part of Chapter 2, we outline some of the specific ways in which Descartes' mind is *not* at one

with its body.

In Chapter 3, we explain Spinoza's view of the mind. This chapter has the following structure: First, we discuss briefly how Spinoza's view is a development from Descartes' views of the human mind and the mind–body union. Then we introduce Spinoza's view that the mind is an understanding of the causal structure of its body and exhibit the main features of that theory. We also provide some examples of types of mental states and how those mental states arise from Spinoza's theory of the operations of the mind.

In the middle of Chapter 3, we explain what it is for the mind to be an understanding of its body. It is important to come grips what understanding, and ideas are since understanding is the basic operative tendency of the mind and the mind is an idea according to Spinoza. He thinks of understanding in terms of an account of the causal structure of its object. This removes some of the strangeness that arises at one's first encounter with Spinoza's thesis that the mind *is* the idea of its body. The gist of our explanation is that the mind's nature consists of cognitive activity which is internally structured as a kind of explanatory and causal account of how the human physiology operates. That is partially why we can think of Spinoza's mind as a *cognitive model* of its body.

In the rest of Chapter 3, we explain how Spinoza's theory of the mind explains particular types of mental states as ideas of bodily changes which depend on the mind's basic cognitive structure (which is structured to be a causal account of the body's operation). Roughly, those cognitive states are divided into mental actions and sensory perceptions. We also explain in what sense the mind "affirms the existence of its body".

Basically, Spinoza's view is that the nature of the body is *intellectually given* to the mind. The mind as an understanding of its body presupposes the existence of the body as its subject matter. That intellectual presupposition is what drives the real-time formation of thoughts and perceptions at the basic level of human cognition. Finally, we discuss alternative interpretations of Spinoza's view.

In Chapter 4, we investigate what our interpretation of Spinoza's view of the mind has to say about what the so-called *conatus* is. Spinoza thinks that the natures of living beings consist in self-regulative tendencies, which he calls conatus, a kind of a proto-biological concept. That notion of a self-regulative tendency seems to be best suited for explaining the *physiology* of organisms. Spinoza's remarks on conatus are puzzling because he says that the mind's conatus is the same as the physiological conatus. He also says that mental decisions and appetites are *one and the same* as physiological tendencies. That is a problematic claim since Spinoza also thinks that the mind's operative tendency of cognition is *different in kind* from the motive tendencies that drive the body's life activities. Therefore, what he means cannot be a straightforward *identity* between mental states and physiological states. Whatever it is, the conatus of the mind must be distinctly cognitive.

In our subsequent answer to that interpretational problem, we use our main thesis that the mind is an understanding of its body to explain the agreement of the conative tendencies between the mind and its body. If Spinoza thinks that the human body is alive due to its self-regulative physiology, the mind must be correspondingly alive because its cognitive structure is self-regulative. The mind is a conative being insofar it is a cognitive

model of the operation of a living human body. This is a bold move on Spinoza's part. He subsumes the conative aspects of the mind under his broad cognitive theory of the mind's basic operation.

One important challenge which we try to address in Chapter 4 is that Spinoza's view of the mind as a cognitive model seems to entail that the mind is merely a calculator of its bodily states. If the mind would be merely symbolically calculating (or otherwise predictively *measuring*) its body's operations, then one could hardly call the mind a living thing. That is because such a mind would not be doing any better or worse when its body is doing better or worse. If, for instance, the human body was hurt, the human mind as a predictive model would merely *dispassionately derive* a symbolic output that corresponds to the bodily change as an output of its predictive calculations without being any worse for it. In Chapter 4, we explain why that is not an accurate description of Spinoza's view. We see by the end of the chapter that he has an interesting cognitive account of what feelings and mental appetites are.

1 Descartes' View: The Mind–Body Union by a Third Factor

1.0 Motivation

The goal of this chapter is twofold: First, we highlight that in Descartes' view there is a deep difference between the natures of the human mind and its body. Then we will explain Descartes' account of the mind–body union that arises from that difference. I maintain that Descartes has what we call the two-agent view of the mind–body union. My intention is not to present a radical or comprehensive reading of Descartes. Rather, we focus on those aspects of his view which helps us to understand Spinoza's critique of Descartes, and by extension, Spinoza's own views about the mind and its union with the body.

It has been argued that Descartes' views of the mind's separateness from its body has been exaggerated in the broader philosophical community for the purposes of portraying Descartes as a *locus classicus* of whatever we, the moderns, find mistaken about the so-called mind–body dualism. That assessment has ignored the detailed "anatomy" of the union of the mind and body which Descartes lays out in his *Passions of the Soul*.[4] This estimation seems to be correct.

However, my objective is not to deny that the Cartesian view of the mind-body union is rich and detailed. Instead, the line of argument in this dissertation concerns the suitability of the mind's *nature* to be united to its body, that is, whether one can

[4] See Brown (2006), p. 5.

understand what the mind-body union is by understanding the nature of the mind alone as a thinking being. This chapter argues that the nature of the mind is radically different from that of the body. Because the mind and body are two agents that have separate natures, the mind cannot be by its essence united to a body without the addition of some third factor beyond those of the mind and body.

The latter half of this chapter is devoted to showing how the agreement between mental and physiological states occurs in Descartes' two-agent view. Those sections maintain that the two agents are in a communicative relationship, and that the mental agent is as it were a supervisor of its body. The significance of these details is that they serve as a concrete setup for Spinoza's critique of Descartes' view in Chapter 2.

1.1 The Mind's Essence as an Encapsulated Mental Agent

Before we examine Descartes' notions of the body and its union with the mind, we explain in what ways the nature of the mind is separate from the nature of the body and the nature of the union itself. I argue that according to Descartes the mind is in various ways encapsulated away from the body. As a result, we see in the last section of this chapter that he cannot give much content to what the notion of the mind–body union is, although he is quite ready to elaborate what is the functional role of the union.

In this section, we explain that Descartes thinks that the mind is a mental agent whose central operative principle, i.e. essence, is separate from the nature of the body. I mean by this that the account of what the mind is does not involve in any *essential* way

the nature of the body. The mind by nature lives by its independent operative principle and only by virtue of being united to the body acquires powers and tendencies which integrate it to the bodily life. This is what I called the two-agent view. The mind and body in Descartes are two heteronomous agents which come to agree with one another's states through an external union which compounds them together into a whole human being.

The first thing is to make clear in what sense the mind is an agent. The mind is an agent in the sense that its activity is internally directed and its capable of pursuing a project of its own without depending on anything bodily. Descartes thinks that the mind is an intellectual substance, which is just another way of saying that the mind is an independent causal source of its activity. A third way to say the same is that the actions of the mind can be *understood* independently of anything bodily.

The mind's essence as a thinking being (and the powers that belong to that essence) are encapsulated away from anything in its body. Next, I explain how this status of being an essentially independent agent is manifested in the powers of the mind, and how the intellect and the will as the essential powers of the mental agent are independent of anything bodily.

1.1.1 The Priority of the Intellect over the Bodily Senses and Imagination

The mind is internally directed in the sense that Descartes thinks that the activity of judging, or intellectual cognition, is in some sense prior to the senses, the memory and the imagination. This is an important commitment because he believes that those sensory

capacities depend essentially on the mind's union with the body. The senses provide the mind with cognitive material (e.g. mental images) by which the mind can judge what happens in the body or to form thoughts about the nature of bodies.

Crucially, Descartes thinks that the material from the senses is merely material. If the mind has a sensation of, say, some bodily pain, it does not yet affirm that something is happening to the body. As we later explain in this chapter, the bodily sensation does in some sense move the mind to make judgments but in and of itself it does not yet constitute an affirmation. The only source of affirmation is the intellectual activity of the mind. The mind needs to grasp what that sensory information is telling us and then also affirm or deny that something is the case.

A similar point about the priority of intellectual powers is made in two famous examples concerning the wax, and the chiliagon (1000-sided regular polygon). The first example of the piece of wax is meant argue that the power of the intellect is prior to the senses. The chiliagon example is aimed to do the same for the imagination (which is the mind's power to form mental images, retrieve memories and combine parts of images into a new image objects).

In the wax example, the meditator is observing changes in a piece of wax that is melting. The piece of wax goes through various changes in sensible qualities: solid to liquid, lacking smell to fragrant, hard to soft, and so on. The sensory capacities of the mind are unable to tell the mind what unites these sensible features to the same object, a piece of wax. It is only by the intellect that the mind can judge that all these sensations are manifestations of the same bodily thing that undergoes structural variation.

Next, suppose that one is trying to form a chiliagon in one's mind. The imagination can form an image of, say, a hexagon, but it won't be able to produce a distinct mental image of a 1000-sided figure that is distinguishable from a circle. Since the intellect is capable of thinking of a chiliagon, whereas the imagination cannot do so, Descartes argues that the intellect does not depend on imagination.

The intellect is prior to the senses in the sense that the mind needs the intellect to form judgments but does not need the senses. The sensory powers are as it were appendages or extensions of the mental agent which it uses for its thinking.[5] Descartes lists the capacities of the thinking being in the 2nd Meditation as follows:

> "But what then am I? A thing that thinks. What is that? A thing that doubts, understands, affirms, denies, is willing, is unwilling, and <u>also</u> imagines and has sensory perceptions."[6]

The underlining of "also" is my emphasis. All the capacities listed before "and also" (*quoque*), are capacities which belong to the purely mental (or intellectual powers) which are the understanding and the will, whereas the items listed after it (imagination and sensory perceptions) depend on the body. Arguably, Descartes indicates by the addition of "also" that those powers are something separate and extraneous to the core being of the mental agent.

The extraneousness of the sensory power to the nature of the mental agent is supported by the following passage in the 6th Meditation:

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[5] I'm indebted to Carriero (2009), p. 127, for this way of expressing this idea.

[6] AT VII:28

> [...] I consider that this power of imagining, which is in me, differing as it does from the power understanding, is not a necessary constituent of my own essence, that is, of the essence of my mind. For if I lacked it, I should undoubtedly remain the same individual as I now am, from which it seems to follow that it depends on something distinct from myself.[7]

Here Descartes clearly asserts that the mind does not need the sensory powers in order to remain the same being. Crucially, he emphasizes that from that it can be inferred that the sensory powers depend also on something else beyond the mental agent, namely the body.

Later in the 6th Meditation, Descartes returns to the same topic:

> [...] I find in myself faculties for certain special modes of thinking, namely imagination and sensory perception. Now I can clearly and distinctly understand myself as a whole without these faculties; but I cannot, conversely, understand these faculties without me, that is, without an intellectual substance to inhere in. This is because there is an intellectual act in included in their essential definition; and hence I perceive that the distinction between them and myself corresponds to the distinction between the modes of a thing and the thing itself.[8]

This passage explains powerfully the separateness of the nature of the mental agent from the nature of the body. He calls sensory powers "special modes" of thinking and distinguishes them from the intellectual substance itself. So, they are ways the mental agent cognizes things, or modes of an original intellectual activity. The sensory powers in some sense extend intellectual cognition.

What is also noteworthy in the above passage is that Descartes indirectly implies

[7] AT VII:73

[8] AT VII:78.

that the intellectual substance cannot be understood without the intellectual powers. Therefore, he calls the mind an "intellectual substance", rather than a mental substance. The mind's capacity for judging cannot be separated from the mind itself, which is why Descartes does not say that sensory powers depend on some further powers of the mind. Instead, he moves from saying that cognition via senses includes by nature an "intellectual act" to the distinction between the modes of a thing and the thing itself. The assimilation of an intellectual act and the thing itself indicates that the intellectual activity is inseparable from what it is to be a mental agent.

That the mental agent is internally determined or directed is also illustrated by an earlier remark in the 6th Meditation where he says that when the mind is engaged with a purely intellectual subject, it turns towards itself. Whereas when it is using its sensory powers, it is directed to some subject matter outside itself.[9] What this shows is that true intellectual activity is in encapsulated or complete on its own. When the mind is engaged with thinking of a subject matter that does not involve any notion concerning the body or bodily extension in general, it is exhibiting its bare nature as an intellectual substance. In that state, it is evident that the mind does not need anything for its core activity, and in that sense, it is a mental agent because it does not even need anything bodily as a subject matter for its intellectual activity.

[9] AT VII:73.

1.1.2 The Good of a Mental Agent

A second way in which the mental agent is internally determined is that it has its own characteristic project or pursuit. That pursuit must be understood through the core activity that defines the mind as a thinking being.

Descartes distinguishes between two intellectual powers: the intellect and the will. The intellect itself is receptive. Its state is determined by the nature of its object of thought which gets taken as its subject matter. This is to say that the intellect does not create its subject matter. Because the intellect is inherently passive, it is not the source of the thinking being's pursuit.

The other intellectual power of the mind is the will. Descartes writes that "the will is the ability to do or not do something. That is, to affirm or deny, to pursue or avoid".[10] In addition to the earlier distinction between the intellect and the will, Descartes makes a further distinction within the will itself between two different functions: affirmation of the true and pursuit of the good.[11] Affirmation of the true is the use of the will in forming judgments about natures, whereas the pursuit of the good is a desire.

From the above it is clear that the will is internally inclined, in judging intellectual matters it inclines towards the truth. In practical matters, it has the appetite towards the good. It is not clear what kind of relationship Descartes sees between these theoretical and practical inclinations of the will. However, the mental agent is not a merely reactive

[10] AT VII:57.

[11] Descartes makes it clear in AT VII:58 that the will has two objectives: the true and the good

thinker. There is an active, inner determination in the thinking being that is expressed in its power of willing.

Since the power of willing is already something that the mental agent has in virtue of being a thinking being, i.e. a being who makes judgments, the goods of the mental agent do not essentially depend on the body. These cognitive goods are, for instance, God, understanding [*scientia*], generosity and love. Union with God is the highest good of any being and thus the object of the will itself on which other goods somehow depend. Scientia is the kind of certain knowledge, namely understanding. This is exactly the kind of good that expresses the constitutive power of judgment of the thinking being. Generosity and love are in Descartes' view essentially modes or acts of the will. None of these goods depend on the mind being united to the body because they are expressions of the intellect or the will, or both together.

The conclusion is not that the mind cannot consider anything bodily as a good to itself or that the mind cannot care about the body. Instead, the point is that Descartes thinks that the thinking being as such is directed towards ends which do not require the body. There can be some inclination in the mind without there being any state in the body which agrees with the mind in that regard.

Later in Chapter 3, we see that Spinoza's position is much more radical because he thinks that there is no good that drives the mind forward. According to Spinoza, the mind is "moved" to do something only insofar as there is some true idea that is cognitively adequate for forming another idea. There is no internal inclination towards the good that enables the mind in ways that are independent of, or even in conflict with, the order of

physiological causes. Spinoza's great concern is not to eliminate or reduce the mind into mere matter, which is for the modern reader perhaps the standard or most familiar conception of naturalism. Spinoza's target is another kind of naturalism where individual things such as mind and bodies are natural insofar as they are understood through one ultimate subject matter, Nature. Nature consists of causal principles (both cognitive and physical), and all finite things are understood as local expressions of those causal principles. Those causal principles in Nature are generative, in the sense effects are properties that are understood to follow from the nature, or essence, of the cause.[12] Nature is uniform in the sense that everything that happens in Nature can always be understood to follow from the way something is determined to act through its nature. This is naturalism in at least two senses: Nothing happens without being it being understandable through some nature (capital N or otherwise), and second, nothing happens simply because it is good that it happens, i.e. because there is some metaphysical good that is external to the thing that acts.[13]

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[12] This is a different conception of efficient causation than our modern conception of it. Spinoza thinks that (efficient) causation is how an essence is determined to produce or generate certain effects, which follow (or are understood) through that essence. In this way, one can think things can cause other things eternally, e.g. from a more primitive law of nature can be understood to follow another secondary law of nature. For instance, a global invariant pattern of activity in Nature sets boundaries on what the more local patterns of activity are. For a modern reader, this kind of causation can be peculiar since we think of efficient causation strictly in the context of temporal succession, e.g. a cause must be temporally before its effect. Spinoza does accept that principle within the context of temporal duration, but thinks that the notion is broader, like I explained. Further, a modern reader might think that causation is between events, whereas Spinoza thinks of *things* (or more properly, their essences) as causes.

[13] This remark is about Spinoza's conception of Nature as devoid of purpose or final causes. He thinks these are products of superstitious and wishful thinking that humans have projected onto Nature. That projection originates from our imagination. Imagination is the basis of our hopes and fears. It is also the source of a tendency to anthropomorphize its objects due its inherent limitations.

Spinoza denies from both the mind and the physiology a good-directed operative principle because it would be orthogonal and heterogenous to efficient causation. Again, this does not entail that the mind is subsumed under material efficient causation. Spinoza thinks that the mind has its *sui generis* kind of efficient causation, which is based on a relationship of understanding of a subject matter. When the subject matter under some idea is understood, it is also understood what other ideas must follow from the first idea. This is a kind of intellectual determination or necessitation. For instance, in virtue of understanding the Pythagorean theorem the intellect infers (when applied to the idea of a circle) that a point on the circle can be satisfies an equation of the form $x^2 + y^2 = r^2$. The operative tendency of understanding is cognitively determined to form that new idea due to its initial *understanding* of the theorem, and not because its ideas exert mechanical force on one another.

In Spinoza's view, Descartes problematically ascribes to the mind both that kind of cognitive determination in the intellect and sense perception, but also a totally different kind of undetermined agency where the will is driven by a pursuit of the good.[14] That kind of division of explanation within the mind is what Spinoza finds contrary to the unity of Nature. That division is by Spinoza's lights one of the sources of Descartes' obscure view of the mind-body union.

[14] This explains why Spinoza inserts a comment about the good-based, strong teleological causation in 3p9s of *the Ethics*.

1.1.3 Absoluteness of the Will

The mind is also separate from the body through the way the use of the intellectual powers involves the body.

The exercise of the will is absolute which means that there is no causal factor external to the power of willing itself that can restrain it. This means that no passion or desire can force the will to make a judgment about the truth or goodness of something. This further explains what it is for the mind to be an agent that is encapsulated away from its body. No cognitive state that depends on the body can force the will towards some decision.

Descartes writes in the 4th Meditation:

> The will, or freedom of choice, simply consists in our ability to do or not do something (that is, to affirm or deny, to pursue or avoid); or rather consists simply in the fact that when the intellect puts something forward for affirmation or denial or for pursuit or avoidance, our inclinations are such that we do not feel we are determined by any external force.[15]

The explanation of the absoluteness that characterizes the will's operation comes after the word "rather". He maintains that the will can incline towards affirming the truth or pursuing the truth without doing so in virtue of being determined by any external factor. Even though the will can be inclined towards the good or affirming the truth, and it can be persuaded to judge in favor of good acts and thoughts that exhibit truth, it is not forced to do so. The will chooses to be persuaded by its own judgment. This is because

[15] AT:VII 57

the will operates on a different principle of operation, namely that it consists of the ability to decide *because* something is true or good. The absoluteness of the will is that it is always able to choose in that way, and not because the will is forced to make that decision. Another way to put it is that the will is a heteronomous power in relation to desire. That is so, even though desire is a mode of the will.

For instance, suppose that the mind judges that the Pythagorean theorem is true based on first having understood its geometrical demonstration. The intellectual affirmation consists in determining whether the intellect's understanding of the theorem is sufficient. When the mind forms a judgment, it considers the reasons behind the proposed affirmation. In as much the mind already grasps something about the subject matter, the mind uses those resources to considers whether that new affirmation would be true. That act of judging differs from any inclination which might move the thinker towards one direction or another. This works both in the case where the understanding of the matter is lesser and where the understanding is greater.

As an example of the first, if a student is assigned the demonstration of that theorem as homework, he or she would certainly like it to be true and perhaps as a result might form the opinion that it is true. Even though that opinion would be correct, it is not based on understanding of the subject matter. Inclinations of the will are in that sense distinct from the will's absolute power to choose and make decisions. An inclination of the will is a totally different kind of principle than the will has internally when it affirms the truth of the theorem out of understanding.

An example of the other possibility is that the subject matter is well understood,

and the affirmation put forward by the intellect is a certain truth. Even in this case, the reason why the will affirms the truth of the Pythagorean theorem is not the fact that there is some intellectual necessity which forces the will to affirm that. Even if the will cannot help in accepting that result, it does so because it sees that the reasons for affirming the truth of the theorem are *intellectually* overwhelming.

The absoluteness of the will is one of the points on which Spinoza's view of the mind strongly differs from Descartes'. Spinoza does not think that the body can determine the mind to think something, but he believes that the mind itself is a certain complex but determinate cognition. What this means is that for Spinoza there is no absolute power of affirming that is separate from the cognitive machinery of the mind. Spinoza thinks that the mind's basic operation is understanding. Cognitive life consists of particular acts of understanding which determine one another intellectually. Descartes' view of the absoluteness of the will in contrast maintains a division between the receptive mental powers and the active will: Even if there is a clear perception of something bad happening to the body, that cognitive state does not as such force the will to decide that it must help the body. In this sense, the active will is the epicenter of the encapsulation of the mental agent from its body.[16]

[16] See Carriero (2015) for a helpful discussion of Spinoza's critique of the absoluteness of the will.

1.1.4 Universality of the Intellect in Relation to the Human Body

In addition to the will being absolute, the intellectual powers are universal in their relation to the body. Because Descartes has argued that the mind's nature does not involve the nature of the human body in any way, there cannot be any cognitive relationship to the particular human body via the intellect.

From the intellect's standpoint, corporeal nature in general comes before the nature of particular bodies. This is evident from the way the 5th and 6th Meditations are structured. Since the intellect does not start its thinking with an understanding of a particular body, it must start from a universal starting point.

In the 5th Meditation, the Meditator inquires whether the ideas of corporeal nature in general portray a determinate reality. Corporeal nature in general is a reality because it is the subject matter of pure mathematics: The Meditator starts from a universal starting point where it recognizes that it has innate ideas of extended quantity, number, size, shape etc. Those ideas enable the intellect to grasp the subject matter of pure and abstract mathematics. Next, the Meditator argues that the corporeal nature in general must be capable of existing because no idea that is clearly and distinctly understood can be false. We don't have to investigate the specifics of Descartes' argument, but what matters is that the reality of particular bodies is secured by the intellect's prior grasp on the universal nature of extended bodies.

The argumentative structure of the 6th Meditation reveals that there is nothing in the intellect which ties its cognitive structure to a particular body. All the understanding

we have concerning the particular human body and other particular bodies comes through the senses. The Meditator reaches the judgment that a particular body exists through the general judgment that bodies in general exist. The intellect's only gateway to cognizing this particular body is that there is a receptive power of imagining and sensing which communicates ideas of bodies to the intellect. The intellect does not by itself understand the source of its sensory ideas involving bodies. Descartes argues ideas involving bodies are sourced in some corporeal substance and not in the mind of God directly or the mind of some angelic intellect.

The intellect understands that bodies exists because there are sensory ideas which are of the subject matter of pure mathematics. So, in effect we know that bodies exist because we have particular sensory ideas whose objects are grasped through general mathematical and geometrical terms. Descartes admits that bodies are not necessarily exactly as the sensory ideas present them. Aside from those particular details, bodies must exist because "at least they possess all the properties which I clearly and distinctly understand, that is, all those which, viewed in general terms, are comprised within the subject matter of pure mathematics."

While the intellect can be certain that corporeal nature in general exists, there is still doubt about particular natures. Descartes takes as an example the understanding that the sun is of such and such a size or shape. The point is that even though imaginations reveal to us the extended world from a particular point of view, the intellect does not by its nature share that viewpoint. That is why the argument in the 5th and 6th Meditations proceeds from the universal, mathematical features of bodies towards the sensory ideas

that are of particular bodies.

Descartes never makes the argument that one could understand that the mind is united to a particular body due to the cognitive structure of the mind itself. That is because such an argument is not available for him. The intellect is a power that is a general capacity for perceiving the natures of things. Because the structure of the intellect is not essentially related to any particular body, the Meditator must reach a judgment by reasoning about what the source of sensory ideas is. This is one of the reasons why Descartes thinks the mind is not essentially united to a body. There must be some additional factor, i.e. the mind-body union, which constitutes the reality that the intellectual being is at one with a particular body.

The universality of Descartes' view of the intellect foreshadows the source of Spinoza's criticism of Descartes and Spinoza's own view of the mind. Spinoza's explanation of what it is for the thinking being to be united to a particular body does not concern the human body as a source of sensory ideas. Instead, his explanation is that the mind's cognitive structure itself reveals that the mind is united to a body. His view is that the mind is united to a particular body insofar as it has a cognitive structure that is particularized to the nature of its body. We talk about this at length in Chapter 3.

1.2 The Human Body as an Automaton

Descartes view of the mind–body union is what I called the two-agent view. Not only does

the human mind operates by its independent causal principle, but that the human body too is capable of acting from its (relatively) self-contained physiological structure. Here Descartes departs from earlier Aristotelian views according to which the body is matter which is animated by an organizing principle, which is the soul, the form of the body.[17] In contrast, Descartes thinks that a body is in its own right a fully determinate and operative thing which does not depend on any external organizing principle. Living bodies are automata. Descartes maintains that the core of the body's nature is that it is structured to perform self-regulative life functions on its own, because the physiology of the body is complex enough that it can act on its own.

The body by its structure tends to its own preservation and for its own benefit. In Passions of the Soul, it is evident that the body can do many things on its own. It has self-regulative functions such as metabolism and distribution of heat. Generally, the body is powered by the heat sourced in the heart. The body is sensitive to sensory stimuli such that it can form autonomic and reflexive reactions to them. For example, when I burn my hand on a hot edge of an oven, my body withdraws the hand as a physiological reaction. A reflexive reaction like that is quite simple compared to what Descartes thinks the human body is autonomously capable of. He seems to think that the body can perform

[17] The human body seems to depend on its union with the mind in at least one regard. In a letter to Mesland (AT IV: 346), Descartes mentions that the numerical unity of the body in a man depends on its form which is the soul. The point in this decidedly Scholastic passage is that the body when considered as a fluctuating structure of matter stays never the same since its constitutive parts are under constant change. The register of the discussion is ontological. It does not concern the causal operative principle of the body. When we say that the body operates independently from the mind, we are only talking about the physiological operations.

complicated motor action sequences on its own, like walking towards a table to grab a piece of bread which was presented in a brain image. It is also capable of affective responses. For example, the sight of an angry dog will create an image in the brain and initiate an agitation in the nervous system. These are what he calls "agitations of spirits," which come in types, e.g. patterns of motion in the brain which are like unique signatures of those affective responses.

A definite pattern of agitation causes a definite affective behavioral response, for example the agitation from the image of an angry dog will make the body prepare to flee or, alternatively, prepare to confront it, depending on specific factors. Next, the body might go on to run away or even fight the dog without any assistance from the mind, unless there is some reason to intervene. That kind of pattern of motion in the spirits corresponds to what we would call "fear", but that brain pattern is not really a passion (a term roughly for what we moderns call an "emotion") because it doesn't involve any perception by the mind.

This is how Descartes thinks animals function.[18] They are fully bodily agents without minds. They are so complex that their nervous systems can sustain complex patterns of action and reaction. When a cat prowls for small critters around one's apartment, that pattern of behavior is like a mechanical watch unwinding, a metaphor which Descartes himself uses.[19] Of course, there isn't just one pattern that the cat is

[18] AT XI:341–342.

[19] See Descartes, *Treatise on Man*.

operating under. Rather, different kinds of motor sequences are launched by different stimuli, either internally in the cat, e.g. hunger or appetite for excitement, or from the external environment, e.g. brain images of prey.

1.3 The Mind–Body Union

In this section, I investigate what Descartes means by the "special right by which I call this body 'mine'".[20] The underlying problem in that quote is that there is some special fact of the matter that my mind is at one—united to—to this particular and no other, making this body *my body*. This is a special concern for Descartes since the nature of the mind does not involve the nature of this particular body.

We explained in section 1.1 that in Descartes' view the mind is an intellectual agent which is in a sense encapsulated away from any particular body. This is apparent from the priority of intellectual activity over sensory information. Second, the intellectual agent follows a heteronomous causal order insofar as it strives towards the true and the good. Third, the will's absolute power of making decisions is insulated from the external forces that sensory ideas impose upon the will. Fourth, the intellect's cognitive starting point is universal, that is, it does not have a cognitive structure that is fitted to a particular body.

Now, the human body is also in an agentive being in the sense that it functions on

[20] AT VII: 76

a separate physiological principle that does not depend on the mind's constant assistance for its guidance. This creates a special question for Descartes of what it is that unites these two agents into one human being and what it is that grounds the agreement of mental and physiological activities.

1.3.1 Explanandum: Mind's Agency at one with Body's Agency

The goal of Descartes' mind–body theory is to provide an account describing how it is that two agents—mental and bodily—exist together and form one unified agency of a human being. For example, when I feel pain in my hand, Descartes thinks that the body is determined on its own power to move the hand away from the source of the heat. Naturally, I observe that my mind forms concurrently a corresponding state of decision to lift my hand away. Because Descartes thinks that the body is an automaton capable of regulating its actions towards its own good, he faces a special challenge to explain the unity of human agency. The mind's nature expressly doesn't involve the nature of the body. Therefore, it is a special concern of Descartes' theory to provide an explanation of what it is for my mind to be at one with this body in particular, i.e. that this body is my body.

The whole human being is the compound of the two agents insofar they are united together. Descartes thinks that in addition to the two agents themselves there needs to be a union between them which forms into the compound and which makes it possible that

the agents can act together.[21] Since the agents operate on separate principles there needs to be some real ground which makes it the case that they can interact and communicate.

That real ground is not the same as the communication itself. I emphasize this because one might think that only the interaction needs to be added to mind and body to get them to be a compound. The union grounds the possibility of interaction, namely that the mind and the body are so fitted together that they can interact in particular instances. That is why Descartes says that the sensations arise from the union of mind and body. Arising indicates that the interactions are not themselves the union.

1.3.2 Two Ways of Experiencing the Union with the Body

Abstractly, we can think that there is both an input side of the will and an output side. The input side of the will is its capacity to be moved by some mode of the mind, e.g. a sensation of pain. The output side of the will is its capacity to make decisions, i.e. to affirm or to deny, and to pursue or to avoid. In the first sense, the will is the patient and in the second, the agent. The same human body stands on both sides of the will. The body can act on the will via the bodily senses and prod the will towards action. Also, the

[21] There has been a lot of discussion whether this third thing is a mode, a substance or not really a thing at all. See Hoffman (2009) p.78 and Wilson (1978), p. 205, as examples. My project doesn't turn on the details whether there is a hylomorphic connection between mind and body or whether there is just a divinely instituted agreement between mind and body.

will can by decision come to initiate a sequence of motions in the body, e.g. lifting a hand off a switch that the mind deems to be dangerous.

Correspondingly, there are two factors of determining what it is for this body to be my body. The more salient experience to us is the will's ability to move this particular body. My mind has the power to move, for example, this hand which is attached organically to this body but not that hand attached to that human body over there. The way I'm phrasing this differs from the way we feel this difference. My decision to move my hand seems to be at one with this hand because it is an extension of this body with which my mind is united. In contrast, my will is not at one with the hand of the other body. Because of this phenomenon, we might think that the power of the mind to move a particular body tells us something essential about the union of the mind and the body. In that case being at one with the body would be a matter of the decisions of the will being united to certain motions in the body. However, Descartes doesn't put much weight on the mind's ability to move the body: he merely mentions it in passing.[22]

Descartes places a greater emphasis on the input side of the will when he talks about what it is for the mind to be at one with the body. In the 6th Meditation he writes:

> There is nothing that my own nature teaches more than that I have a body, and that when I feel pain there is something wrong with the body, and that when I am hungry or thirsty the body needs food and drink, and so on.[23]

Descartes has the view that the mind is being passively taught that it has a body. The

[22] AT XI:343.

[23] AT VII:80.

other thing that is noteworthy here is how the mind seems to be a sort of a physician of its own body: the feeling of pain is a symptom that teaches the mind that there is something that is wrong with the body and that it is needs help.

Descartes also uses the phrase "my own nature", which doesn't stand for the nature of the mind. The mind doesn't have inbuilt information about its body because the mind's structure is fitted just to its task of being a thinking being. He tells us later[24] that the phrase signifies the totality of those things that God placed in me when he created me. Because the nature of the mind and the body are separate from one another, God had to create an additional third factor which is the union of the mind and the body. When Descartes says that his nature teaches something to him, he means that those "teachings" arise from and depend on this third notion of the mind–body union.

Our immediate task is not to explore the metaphysical status of the union but rather investigate the effects of the union, namely how in practice the mind is at one with the body. The mind must be taught about its body and it "reads" the state of the body from the signals that the body sends it. This suggests that the Cartesian mind has a potential problem of being a detached supervisor and an observer of its body.

P. F. Strawson made an interesting critique of what he calls the Cartesian view in his book *Individuals.*[25] He assumes that there are mental and bodily predicates that are attributed to mind and body respectively. To the mind we attribute predicates like "is

[24] AT VII:82

[25] Strawson (1996), p.101.

thinking" and "feels pain" which do not involve this body or any other body. His critique of the Cartesian position is that since Descartes thinks of the person as possessing only mental characteristics, that mind doesn't bear any special relation to the body it has. Rather, my body is just one body among all the bodies in the world. Because the mental predicates do not involve this body in particular, there is an issue of identifying which body among all the bodies is the body of my mind. This identification would proceed like this: I cannot be separated from this body and I attribute pain in this body—not in other bodies. Interestingly, these kinds of descriptions are similar to what Descartes gives in the passage where he talks about the special right by which the meditator believes that she is united to her body.

Strawson's discussion has certain epistemological overtones which do not fit into the present discourse, but his overall point is clear: it better not be the case that the mind–body union theory has the outcome that understanding the mind's relation to a particular body is a matter of identification. A successful mind–body theory should give us a substantial and understandable account of what it is for this mind to be united to this body. Consider the situation in which the best we can do to understand the union of the mind to this body is to go around the list of our cognitions and sensation and triangulate from there which one of the bodies is our own body. While one might on a certain level of description get the answer right, the notion of there being some real ground of what it is for *this* mind to be united to *this* body would not be understandable. We would not have provided an account of the union that substantiates the fact that my mind is at one with this body.

1.3.3 Pilot in a Vessel, Mind Being the Body and a Third Path

I don't believe that Descartes really offered an account of the mind–body union which would fit the description which Strawson labels as "Cartesian". But Strawson makes us ask what Descartes does differently. That sets a fertile background for our discussion. For Descartes does consider a comparative view of the role of the mind which he wants to avoid:

> Nature also teaches me, by these sensations of pain, hunger and thirst and so on, that I am not merely present in my body as a sailor is present in a ship, but that I am very closely joined and, as it were, intermingled with it, so that I and the body form a unit. If this were not so, I, who am nothing but a thinking being, would not feel pain when the pain when the body was hurt, but would perceive the damage purely by intellect, just as a sailor perceives by sight if anything in his ship is broken. Similarly, when the body needed food or drink, I should have an explicit understanding of the fact, instead of having confused sensations of hunger and thirst.[26]

Descartes is worried in this passage that the readers will pin onto him a view that the mind is an intellectual observer and operator of its body. Descartes' view of the mind invites that interpretation of the mind–body union because the mind is a purely thinking being whose nature does not involve anything bodily. It would be natural to think that such a thing would only operate its body as it would a tool. Such a mind would be suitable for its body in the same as way a user is suited to its tool.

[26] AT VII:81.

A thinking being using the body as a mere vessel would perhaps care about the body—but only insofar the body satisfies the intellectual ends of a thinking being. A thinking being is driven by its pursuit of distinctively mental goods which are those of understanding and exercise of its agency. The body of that kind of detached agent would be useful in as much it grants a window for the mind to intellectually explore the world, insofar as the world is an object of understanding. These intellectual benefits of having a body would not be restricted only to the possession of the capacity of sensory perception. They would also encompass the body's ability to move since that allows the mind to discover new objects of cognition.

In such a model, there would be no *immediate* care for the body's wellbeing as such. That is fundamentally what Descartes tries to express in that quoted passage when he points out that the intellectual observer does not feel pain. The sailor of a ship cares about the ship as her means of carrying herself to the destination harbor. The sailor doesn't feel the damage done to the ship in her mind as hurt or pain that is done to her immediately, but rather that her pursuit of the destination has been disturbed or inhibited. For the same reason, Descartes cannot allow that the feeling of pain is merely a cognition of damage done to the body.

The pilot-in-a-vessel type of mind–body union is also, I believe, the underlying reason why Descartes doesn't emphasize the output side of the will in the mind–body union. If the mind's union to the body was only manifested in acts of will, i.e. we would only communicate with the body by active willing without any feedback from the passions, there would not arguably be much difference between the human mind and the

pilot type of agent who is operating the body for its own purely intellectual purposes.

The reason is that the thinking being has to learn about what the body needs, what it demands from the will, and so on. The union with the body comes with a new mode of being, that is, being at one with the body. The mental being needs to be *taught* what that new mode of being is since the bodily life is not built into the mind's nature.

For that reason, Descartes' account of how the mind is at one with the body focuses on the input side of the will, i.e. sensations and passions. Descartes is concerned about whether he can provide a theory under which the body is related to the mind in such a way that the mind is moved to action which concurs with the body's action. That must be achieved to meet the constraint of immediacy—the mind cannot be merely an interested user of its body.

The sensation of pain is an interesting pivotal case for Descartes. The sensation of pain, according to Descartes requires something what he calls an intermingling of the mind and the body. By this he means, I believe, that the union involves both the natures of the mind and the body. Notice though that the union is not the same as this intermingling nor is the union the same thing as any sensation. Instead, he says that sensations arise from the union.[27] Nevertheless, a sensation of pain does depend on the body because the sensation is produced in the mind due to some activity in the body, and further, a sensation of pain presents the body in some condition. So, clearly the sensation depends on the body.

[27] AT VII:81.

Even though the sensation of pain depends on the body, that doesn't solve the pilot-in-a-vessel problem since one could say that when the intellectual observer cognizes the damage in the body that cognition depends on the body as its subject matter. By that I mean that the intellectual operator could in some sense directly suffer because its activity of intellectual probing and exploration depends in a direct manner on the body as its subject matter. The body is for the pilot-type agent an intellectual window to the world.

Due that worry, the immediate *relationship* of pain to the mind must be capable of being understood without any kind cognitive or sensory relation to the body as its object. Even though the pain is internally sensed to be located within the body, the pain is felt in the mind. But pain is a sensation different from, say, seeing red. Pain carries it with information that something is wrong with us. Seeing red doesn't have this aspect of caring to it. When I see a red lamp on the table, that merely teaches me an observable, inert fact about the world, that the world is in such and such way. It does not immediately tell us anything about my condition. The fact that there is a lamp on the table can be mediately interesting for me, perhaps because it is too dark, and I cannot see. A feeling of pain, in contrast, is of immediate interest and urgency to me because it carries with it the information that it is *I* who has been hurt. Unless I'm suicidal or an otherwise contorted agent, there is no room to question whether suffering and hurting are of importance to me.

However, it is not clear on what account Descartes thinks that a pain felt in the body is a hurt for the mind in an immediate way. Certainly, it is a negative event insofar

the body is the vessel of the mind but that's not what he is after.

Things would be much easier for Descartes in this respect if he could just say that the mind *is* the body. If the mind is the body, then obviously any damage to the body *is* a hurt for the mind. That is because the mind and body are one and the same thing in the strongest possible way—strict identity. In that case, it would be even trivial for Descartes to, say, that any damage to the body is also a hurt for *me*. After all, the self is the mind, at least with more right than the body. The sameness of mind and body would in this way provide a neat explanation of what the integral connection and concurrence of bodily damage, disturbance and suffering is. However, that kind of move is not available for Descartes since the Cartesian mind does not involve the nature of the body. It is not possible that the two things are the same while their natures are separate from each other.

While it is not particularly insightful to say that possibility would solve Descartes' problem, it does point out the extreme poles between which he has to find a place for his view. Part of my argument in this chapter and especially in the following chapter is that there is no natural and substantial notion available when relying on separate and independent notions of the mind and the body which Descartes offers us.

1.3.4 Descartes' Middle Path

Understanding Descartes' middle path goes back to the idea that the agency of the mind

is the will. What sets the Cartesian self apart from the intellectual observer is that the body affects the will in a special way. As I said before, the will has only one object, the good. The will can only be affected by something that can move it to consider something as a good.[28]

Since Descartes views the human body as an automaton, the intellectual observer view is an important litmus test for his view of the union. The body automaton can perform most of the activities of ordinary human life. That view of the body invites one to think that the role of the mind is passive in relation to the body. It seems that the mind doesn't need to do anything to (or with) the body, other than occasionally use it for its own intellectual ends. Naturally, this is not a desirable view for Descartes to adopt, but it seems to follow if there is no special, immediate status that is given to *this* body.

Since the will can only operate on something that is presented under the appearance of good, Descartes needs to adopt a view where the body is a special good for the mind. What this means is that the well-functioning of the body is a good for the mind immediately, not because the mind achieves some further good through taking care of the body. For example, when I hurt my arm, the healing of the wound in the arm is presented as good for the will in virtue of this body being a special good for the mind.

I want to avoid the view that the mind presents the body as an object of love in a similar sense when one loves another person or a cup of coffee.

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[28] There is also the case of being moved to consider a thought because it might be true. That is the other inclination of the will, admittedly. However, the will's inclination towards the truth does not help us much in the present discussion.

The problem with that view lies in the following fact: Loving the things which help the body involves the mediation of bodily senses. Because we are immediately united to this body, we come to appreciate the things that benefit this body. A pure mental agent would have no understandable reason to care about a cup of coffee or an hour of exercise because it has no body. But one cannot fix the situation by adding an additional object of love or interest—the body—to the list of things the pure mental agent loves. That is because adding the body as an extra good doesn't explain why the other goods—cups of coffee and other people—are goods for me. But clearly, we love other people and love coffee, at least in part due to the fact we are united to this body.

The best angle for explaining this is to avoid the view that the body is an object of sense which the mind values. Rather, it is more helpful to think of the goods of the bodily life as *permeating* the will. While that is somewhat loose terminology, it is better than to think of the body as a thing which appears to us *as if* through the senses. A better view is that the union to this body offers a new range of goods for the will by which it is moved.

This curious way of thinking is evidenced by what Descartes writes in his letter to Chanut. He talks about the first emotions the soul of the infant undergoes, when it is born and united to its body. The first emotion the baby's mind feels is joy, on the assumption that the body of the baby functions well (considered a good for the mind). The second emotion would be love when the body is nourished by some food, and the soul comes to love that food.[29] The thing to be noted here is Descartes does *not* that the

[29] See Letter to Chanut 1647.

mind of the baby *at first* considers that the body is a special good. Further, Descartes does not seems to think that the baby immediately takes its body as an object of sense. Instead, he indicates the baby's mind registers what happens to the body as its first sensory objects.

Descartes doesn't give us an explanation of what it is that accounts for the mind to have the well-being of its body as a good. But that is exactly what is characteristic of Descartes' view of the mind–body union. The nature of the mind doesn't itself explain what it is for the mind to have a body, so that the mind's nature cannot give us an explanation why the baby regards the health of its body as a good.

The "specialness" of *this* body for the will consists in simply that the mind takes the well-functioning of this body as its own good. Whatever promotes the well-being of the body can move the will to regard it as a good. This stops short of saying that the body is a good among other goods for the mind. Rather, the body is a "special good" in the sense that everything that promotes the well-functioning of the body (or is a natural expression of the well-functioning of the body, e.g. procreation) is considered as a good by the mind.

That leads Descartes to make a distinction between pain and sadness. He writes the following:

> Indeed, titillation of the senses is followed so closely by joy, and pain by sadness, that most people make no distinction between the two. Nevertheless, they differ so markedly that we may sometimes suffer pains with joy and receive titillating sensations which displease us. But what makes joy ordinarily follow titillation is the fact that what we call 'titillation' or 'pleasurable sensation' occurs when the objects of the senses produce some movement in the nerves which would be capable of harming them if they did not have enough strength to resist it or if the body was not

> in a healthy condition. This forms an impression in the brain which, being ordained by nature to bear witness to the body's healthy condition and strength, represents this to the soul as a good which belongs to it in so far as it is united with the body; and so this impression produces joy in the soul.[30]

Descartes reveals in the passage that he thinks the function of pain and pleasure is to tell the mind about the weakness and strength of the body respectively. Sadness and joy, on the other hand, are recognitions in the self that something bad or good has happened to it. These are different things because it is a different thing to recognize a weakness in the body than to recognize that the mind has become worse. The weakness of the body is physiological. Descartes speaks of it as a matter of the integrity of the nervous system in the face of some stimulation sourced in the environment. Pain quite literally is then a signal from the body to the mind that the nerves in the body are too weak to handle, say, the heat emanating from a hot stove onto which I placed my hand.

That physiological state of my body is a far cry from the mind's recognition that something bad has happened to <u>it</u>. If the mind were to exist without the union to *this* body, there would no substantive way in which the strength or weakness of *any* body would be of any importance to it. The distinction between pain and sadness, then, stands witness to a gap between the natures of the mind and the body. The union role's as the third factor is to account what it is for the mind to be united to the body in such a fashion that the weakness of the body felt in the mind is a bad thing for the mind. That is because the badness in recognizing the bodily weakness is a bad thing for the mind *only in virtue*

[30] AT XI: 399.

of the mind's union with *this* physiologically weak body.

Descartes' middle path between the detached, intellectual observer and the naïve identity thesis requires a third factor. The union makes it the case that the well-functioning of the body is taken within the scope of the will as a good. Physiological weakness of the body and the mental goods, such as understanding, which the mind enjoys by its own nature are not at all similar. They are quite orthogonal to one another, which is why the mind–body union is an explanatory third factor which brings the physiological needs and appetites of the body within the range of the will.

One could suggest that the union has its effect a re-structuring of the will: Whereas a disembodied mind would care about only different species of understanding and perhaps its own existence, the embodied mind has acquired new fixed orientations to its will in virtue of being united to its body. But since the will is a universal and absolute faculty, there is no way to re-structure the will itself. The will is fit to act on *anything* that is presented as a good for it. Therefore, the range of goods for the will seems to depend on the other, perceptive faculties of the mind which do the work of presenting things to the will and thereby moving the will to consider them as good or bad.

To a certain extent, it is the mind itself which is re-structured when it is united to the body. That re-structuring doesn't alter the essence of the mind which consists solely in being a thinking being. It is the mind–body union which brings with it the sensory faculties of the mind which have the power to move the will.

1.4 Supervisory Function of the Mental Agent

The function of the mind is to supervise what the body does, but also to live its own life which consists in thinking. The mental agent and the body agent can act independently of one another. That's why there is a separate matter of how they act uniformly as a compound. For example, to pick a cup from a table in order to drink from it, the body prepares for a certain sequence of motor movements, when it is prompted by the sensory brain image of the cup and the state of thirst that is in the body. The mental agent does quite a different thing: it cognizes the situation at hand and supervises the bodily action so that the body will be successfully able to get what is beneficial for it. Because the agents have so different natures, there is no inbuilt agreement between them. The lack of inbuilt agreement between mind and body leads to the need for communication between them.

Because the agents are each capable of acting independently according to their separate natures, there are two concurrent trajectories of action. The mental trajectory consists in a series of perceptions and acts of will following each other. Suppose that I perceive an angry dog. Luckily, I have a mind so I can do more than an animal can do. Those additional, mental powers which the humans have and animals lack are the capacities to will and to perceive (i.e. to form perceptions and to understand). After a "signature" of the angry dog forms in my brain, and after it is communicated further to my mind, I perceive the emotion of fear as a modification of myself. That modification is

an agitation of the will due the intimate relationship of the will and the self (it seems they are the same for Descartes). Next, that agitation impels my will to affirm that I should keep my distance from the dog. That way I won't fall victim of the future event of a dog bite which presented as bad for me by the emotion of fear. Finally, I affirm the act of fleeing. This mental trajectory continues when some new perception appears in the mind and demands a response.

Let us consider the physiological trajectory of action. The body agent doesn't have the perception of fear but rather it has a brain image of the angry dog. The brain image causes two things: It causes the mental image of the angry dog. But that same brain image also agitates the spirits in the brain and thus causes the emotion of fear in the mind. That is what arouses the original perception in the mind.

But notice that the body can act concurrently on its own. The agitation of spirits in the brain will start a certain pattern of actions and motions in the body. The body forms images of the dog biting the body. The muscles in the body get tense and the muscles in the eye fixate on the dog. Next, the body will form images of situations and paths where the image of the dog bite doesn't occur. Those patterns in the brain will cause the body to start the sequence of bodily motions away from the dog in a way that the body is directed towards those situations presented in the brain images.

The body can do *all of that* on its own when it is initiated by the physical image in its brain. The mind also performs a whole series of activities on its own *without regard* to the body. The question is how are these trajectories of action compounded together?

First, we should observe that the role of the mental agent is to supervise the

actions of the body via judgment. The nature of the mind is to think, that is, to perceive and to will. The perceptive powers divide into understanding and bodily senses. Both of those aim at some level of understanding, or cognition of natures. The function of the mind is to understand what is happening to the self and then form a decision about what the mental agent should do. The supervisory role of the mental agent reduces to both self-cognition and body cognition, and the affirmation of what that cognition proposes.

Because the body can do so much on its own, the mind's primary task is to understand whether an object or an action is good for me or not. A supervisor intervenes only when something is going wrong or something could be done better.

Consider again the example of the angry dog encounter. My body might be agitated in such a manner and to such an extent by the sight of the angry dog that it starts to flee. The safety of escaping is presented as a good thing for the self. The mind's job is to evaluate whether the place we are escaping to is in fact safe for us. The body can instinctually flee of a cliff, for example.

In that situation, the mind would perceive the image of the escape route and reject the proposed thought of escaping to that direction. The function of the will is to stop the action trajectory in the body by willing the body to stop moving.

1.5 Mind–Body Communication

1.5.1 The Function of Passions Is to Align Mental and Bodily Activities

Consider the definition of emotion of love which Descartes gives. Love is "an emotion of the soul caused by a movement of the spirits, which impels the soul to join itself willingly to objects that appear to be agreeable to it."[31]

Suppose (non-counterfactually) that I love my mother. This passion is brought about when a brain image of my mother either directly or by some link in the memory causes a certain perception in the mind. The love is felt[32] to be in the self because we do *not* perceive any cause for it *outside the self*.[33] In contrast, a pain is felt in the body because we perceive its cause to be in the body.

Now, my perception of my mother presents her as agreeable, that is, good for me. The part about "joining itself willingly" signifies my consent of being together. The emotion of love coaxes the will to affirm any imagination where my mother and I form a unit. Descartes has in mind here something like the family unit. These imaginations could be of situations where my mother supports me, I bring her a gift, or something

[31] Article 79, *Passions of the Soul,* AT XI:387.

[32] Descartes uses the term "referred to", but I think in this context "felt" does the same job with more transparency.

[33] This is where the phenomenology breaks down since in fact the perception does have its cause in the body according to Descartes.

mundane but valuable like that. Descartes does not give us a concrete idea of what an imagined unit is, because it is not supposed to consist only of physical proximity. If I love my mother, I won't necessarily want to be physically present in her life.

Even though there is a question of what an imagined unit is, that is only indirectly our concern with this definition. Rather, it is not clear what "agreeable" is. It is clear from the definition that the object of love, my mother, is supposed to be agreeable to me. The self properly speaking is the mental agent, or the thinking being. The emotion of love likewise is a modification of the mental agent. The passion is not a modification of the body since it is a perception. On similar and familiar grounds, the self is not the same as the bodily agent.[34]

Descartes makes it clear that the function of passions, their *raison d'etre,* is that they move the self to affirm whatever is the good of the human being.[35] Because the human being is compounded of two agents, there are two kinds of goods according to Descartes. The bodily good consists in health and strengthening the body's ability to perform its functions.[36]

The mental goods can be discerned from his definitions of joy and sadness. Joy and

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[34] This fact is clearly emphasized by Descartes in articles 2 and 3 of *Passions,* AT XI:328–329. He says that in order to understand the function of passions properly we must distinguish them from bodily functions.

[35] He writes: "The function of all the passions consists solely in this, that they dispose our soul to want the things which nature deems useful for us, and to persist in this volition; and the same agitation of the spirits which normally causes the passions also disposes the body to make movements which help us to attain these things." Article 52, *Passions*, AT XI:372.

[36] See Article 137, *Passions,* AT XI:430.

sadness are recognitions that we possess some good or some harm respectively. Joy is simply "the enjoyment of a good belonging to the soul" and sadness mind is "the discomfort which the soul receives from evil".[37] Ultimately, the benefit that the mind gets out of things is the enjoyment of some perfection. The perfection here is tricky: We might think that the perfection for the mind is the perfection of its cognition. But to perfect one's cognition is to be able to perceive something *truly*. But the best good for the mind is not indifferent to what is veridically cognized. In other words, it is not true that a recognition of a good or of a bad bring equal perfection to the self. The best kind of good for the mind is when the mind cognizes veridically that something good belongs to it. Because the perfection of the mind involves the perfection of the *object which the mind enjoys*, it leaves open what the range of mental goods are. At least, we can say that all of them involve veridical cognition.

When I love something, the passion of love presents something as good for me and that I should unite myself to it because it is good. For example, my love of my mother consists in the presentation of my mother as a good for me. Since I am strictly speaking a mental agent, this would mean that I love my mother because I recognize that she is a good for me.

This brings in the question: How does this involve the body?

It was concluded that the origin of passions is in the body and its functions. Bodies are capable of attachment behavior because the body gets a biological benefit from forming

[37] Article 141, Passions, AT XI:434.

units with others, which would be parental guidance in the case of my mother. In the case of a partner, the benefits of attachment would be procreation and child rearing, since arguably procreation is the preservation of the body in another.

The body gets involved in the good for the self because the bodily goods are presented as good for the self. But the very fact that the body's health is presented as a good for the mind does not originate from the nature of the mind (which is only a thinking thing).

As I said earlier, it was left open what exactly is a mental good. The point of leaving that open was for Descartes to leave room that the self can be as if *permeated* by the bodily agent when the bodily good is included within the scope of the mental good. If we regard the self as a purely mental agent, the only good of the self would be the perfection of its cognition. At least, it is hard to see what else there would be.

If the mind would be solely a thinking being without any involvement with *this body*, there would be no willful or interested co-operation with the body because the self would not regard the bodily good as its own good.

Where does this addition of good come from such that it compounds the interests of the self to those of the body? That can be none other than the third factor of the mind–body union itself. Descartes indicates in the 6th Meditation that the sensations arise from mind–body union, and in Passions that the function of those sensations is to present the object of the passion as good for the mind. That is why the union itself should[38] exist. It is

[38] The union makes possible that there is beneficial co-operation, the extension of the goods of the self, and so on. These are grounds why the providence of God explains the existence of the union.

the ground which makes possible that the mind will form a whole with the body in terms of agency by taking in the bodily goods as good for the self.

The above leads to the view that sensations and passions are signals for the mind. They are signals because they instruct the mind to regard some bodily good as a good for itself. They also coax the mind to consent to actions which promote the good.

1.5.2 Pain as a Signal from the Body

Why there needs to be sensory signals from the body for the mind? Descartes is very clear about this. He thinks there is a dual nature for passions. A passion is caused by a brain state. The origin of pain, for instance, is in the body's weakness and inability to resist some excitation. The nerves carry a signal to the brain causing a signature of agitated motions of spirits. This brain state sets forth a trajectory of action in the body.

Because the body can act on its own and it is structured to follow its own good, the weakness of the body, which the pain indicates, is enough to trigger a trajectory of action. Suppose again that I have burned my hand on the edge of a hot stove. That shows that there is a weakness in the body, an inability to withstand heat. The body will automatically, of its own nature and initiative, recoil away from the source of heat, shielding the burned hand with its healthy hand.

Notice however that the sequence of bodily action and bodily conatus to act themselves are *not* cognized by the mind. The dual function of pain consists in that there

is another trajectory of action that takes off once the sensation of pain is caused in the mind by the agitation in the brain. The function of pain on the mental side consists in its power to move the will towards *acknowledging that the body is now unwell*.

Let me explain that definition. As we saw above, the function of pain was to be a signal about the body's inability to resist certain excitation. The primary function of the pain is not to get the mind to act to remove itself from the influence of that excitation, e.g. removing my hand from the stove. This is because that's further downstream. The function is to get the mental self to affirm that the body is weak and unwell.

Only if the mind cognizes that the body is doing unwell, can the mind decide about whether to do something about the body. Suppose a person is unwittingly holding their hand on the hot stove. There are two cognitive paths for recognizing that the body is unwell. First, the mind could intellectually understand the body is damaged. Via the external senses, the mind observes increasing heat and redness in the hand. However, this sensory observation of heat and redness does not itself constitute an observation that the body is unwell. The mind would have to understand given what it theoretically knows about the body's constitution that it cannot withstand high heat and that the redness is a reaction to tissue damage.

It is clear that above we are talking about the kind of agent which Descartes calls the pilot-in-a-vessel-type. That kind of mental agent operates the body as its vehicle or instrument. This kind of agent would cognize its body to be its own in a different way Descartes thinks is realistic. Such an agent would be united to the body only in the sense that it find itself tethered to the body, unable to be separated from it. It would also find

that it can move the body by its will and that it can see the world through the sense organs of the body. But that kind of a mental agent would not sense pain. Let me explain.

The pilot-type agent understands intellectually that his body is damaged but doesn't thereby cognize that he himself is hurt. This is because the mental agent and the bodily agent are independent entities. There needs to be some additional explanatory information which dictates that when the body is damaged, the self is also hurt.

Conceivably, that additional information could be reasoning: Suppose that the agent has a goal which it tries to achieve by using the hand it has now burned. It would then reason that the damage to the body would hinder it achieving that goal. Because the goal is a goal of the agent, the hindrance belongs to the self. So, the perception of damage in the body is a hindrance to the self by mediation of reasoning.

While it is certainly true that we think that having a well-functioning body is useful, but that kind of conclusion does not describe our intimate relationship to our body. The intimate relationship to the body cannot be based on mind's cognitive initiative, e.g. reasoning that the body is needed to fulfill the goals of the mind.

Therefore, the pain is a *signal* from the body which educates the mind. The sensation of pain confronts the mind with the information that the body is hurt. This way it is not left up to the mind.

1.5.3 Sensations and Passions as Signals for Action

In *Passions of the Soul*, Descartes expresses the view that the mind and body have concurrent and complementary action paths in each type of passion. I believe that also generalizes to internal sensations such as pain and pleasure which are very similar to passions. Let me explain.

Basically, he says that each passion is caused by an agitation of spirits, that is, an excitation in the brain. That agitation *prepares* the body to act in a way that helps to preserve itself and what is beneficial to it. Those same brain agitations also cause the passion in the mind. A passion is a perception of the self which coaxes the will to consent to an action. Generally, that action is the same one which the body prepares itself for concurrently.

Passions and internal sensations are slightly different from one another. The main difference is that a passion is referred to the self (I'm angry) and an internal sensation is referred to the body (My leg is hurting). The referral means the perception of the cause for the agitation of the will itself. When I feel pain in the leg, I perceive the cause of that pain to be in the leg where the cause in reality is.

Descartes clearly says that passions are referred to the self because we perceive no cause outside ourselves for those passions. The somewhat surprising result of this is that when I'm angry, I don't perceive the object of anger as its cause. The reason for this is that there is an estimative function in passions with an object such as anger, hate and love. I do not perceive that there is any cause for the estimation itself. In contrast, notice that the mental image of the thing we are angry about does have a cause in the external thing.

Descartes doesn't think that the mental image and the passion are the same thing.

The passion consists in the perception of the self, i.e. what we cognize to be good for ourselves and the action to which we are impelled by that perception.[39] An internal sensation, on the other hand, tells us whether the body is doing well, so it is not self-directed in the same way a passion is.

Putting these differences aside, passions and internal sensations are both principally body signals. This is because their function is to prepare the self to consent to an action which is helpful for the body.

The concurrent double function of body signals is significant for the purposes of understanding the mind–body union. It shows that mental agent needs a *specific instruction* to do what the body is concurrently primed to do. This will support my thesis that the complementary roles of mind and body leads naturally to a communicative theory of mind–body interaction.

Let's take the passion of anger as an example of the concurrent nature of body signals. The brain excitation which causes anger prepares the body for a confrontation: blood starts to flow rapidly, muscles get tense, heat packs up in the brain. Many describe the emotion of anger to be like a pressure within the body, they feel as if they are about explode. Another metaphor is the boiling of the blood. When one's blood is boiling, one is determined to act rashly and in an agitated manner. Even though there might not be a

[39] Because the mental image and the passion that accompanies it are distinct, he thinks we separate these two from one another. Consequently, he believes that there is a possibility of reconditioning one's emotional reactions towards a particular mental image. This idea of reconditioning is the way in which Descartes thinks he can re-train our will. When we condition ourselves the associative reaction to a particular kind of mental image, its effect on our will is also changed. See Article 45 *Passions*, AT XI:362–363.

specific action to which the body prepares for in anger, there is a type of readiness for confrontation, and for the removal of obstacles and threats.

On the side of the mind, the corresponding emotion of anger agitates the will. It coaxes the will to agree that the threat must be dealt with. This effect of the emotion is more specific than the mere readiness on the physiological level, due to the mind's capacity to discern and imagine. The enraged mind judges it appropriate to be searching for a target.

The function of imagination is to bring a thing present to the self in such a way that the self will react *as if* the thing was present. For example, when I'm angry I imagine the object of my anger even if it is not near me or interacting with me in any way. What's more, the same imagination will bring from the memory all of my past interactions with the thing. An imagination is then also a layered collection of my reactions to the thing I'm angry about. Take, for instance, a feud between neighbors over a tree branch arching over a border fence. In the neighbor's mind, the bitter memories of the long years of conflict can all be condensed into the present imagination of the other neighbor. Because the imagination forms an object, the mind can direct the action of confrontation to a specific object, which would be in this case cutting down the intruding tree without approval of the neighbor.

Due to those layers of images condensed together and affecting the will, the anger's effect on the mind is more intense. Whereas the body is responding to the present state of the body, the mind is in contrast concurrently evaluating what all the mental images amount to as a whole, what they demand from the self. Passions in the mind can

be very powerful and violent if they make the will to consent that the object of the passion is a great evil, even though the situation could be mostly harmless to the body.

Finally, based on the concurrence alone, one might that the function of passions in the mind would be *isomorphic* to what is happening in the body. We might think that in somewhat the same way as the body acts confrontationally the mind would also mentally act confrontationally.[40]

That is not the case. The function of passions is to make the mental agent to consent to what is good for the self. Because the body is brought by the mind-union into the composite self, the mind's job is to look after the good of the body also. Again, we might think that this "looking after" corresponds to the act in the body. Here we must remember that the actions of the mind are affirmations and denials. The mind is as it were a supervisor of the self, and by extension of the body. The primary job of a supervisor is not to *execute* a good decision, but rather affirm that a decision is good in the first place.

1.5.4 Mind's Ignorance of the Body's Operation

Because the mind's nature does not involve the nature of *this* body, the mind does

[40] Descartes writes first that the function of passions is "to make the soul to want the things to which they prepare the body". See article 52, *Passions,* AT XI:372. That is not yet his full view which comes later. There he says that the function of passions is "to consent and contribute to actions which may serve to preserve the body or render it in some way more perfect". See article 137, *Passions,* AT XI:430.

not innately understand what a burned hand does to the body and what it should do in order to properly respond to the situation. The body is a kind of black box for the Cartesian mind: the mind is not familiar with how the body works; it is only acquainted with the signals that the body sends. Because of that bias in the kind of information received by the mind, the Cartesian mind–body union renders sensation and feeling as communication, that is, messages from the body to the mind.

The body is giving the mind a directive for action. A pain as a message directs the mind towards action. I mean that the pain is by nature an instruction for the mind from the body. A sensation as an instruction presents something about the body, but that is not its main function. An internal sensation or a passion does not in that sense exemplify the norms of theoretical cognition. They do not present what the nature of the body is and how it operates. For example, a sensation of pain does not tell the mind what the full causal story of the pain is from the point of view of the body. Rather, the message *screens off* the full story about the operative, agentive principles of the body and presents only a cut-off narrative which abstracts away from the realities of the physiological life tendencies of the body.

Descartes can argue that it needs to be that way since a sensation, e.g. a pain, functions as an instruction. The reason why sensations exists is that they are instructions *for* the mind. Because a sensation of pain is a mode of the mind and exists as a signal for the mind, a sensation of pain is fundamentally mental.

A Cartesian agent relates cognitively to its body, but the mental agent itself is not bodily. The mental agent is compounded together with the body, but the mind does not

have the same structure as the physiology of the body. The mental agent has its own principles and ends which it follows. As a result, the self (or agent) who feels and senses does not feel or sense in virtue of having a direct relation to the body's physiological operations and tendencies. Rather, it relates to the body mediately and communicatively.

The body according to this view is only indirectly known to the mind, a kind of black box, as I mentioned. As a result, the body needs to communicate to the mind what it needs. In the same way, the body needs messages from the mind which supply to it additional guidance for bodily behavior. It is this indirect, communicational relationship which Spinoza criticism is partly directed at.

We will see that that the problem with the communicational view is that the mind is divorced from the agential structure of the body. The messages only tell what the mind should do, but they leave out the causal and agential conditions in the body. When undergoing pain, the mind views the weakened body as this another partly alien thing which agitates us and signals for help.

There's a physiological, agentive side to pain, which the pain state in the mind does not capture in Descartes' theory. Our bodies are organic entities which strive to exist and whose actions are expressions of their physiological tendencies. A pain on the physiological side is a disturbance in the agentive constitution of the body. That would be causally intelligible from the physiological operation of the body. If the mind somehow innately understood what the body's physiological nature is, it would innately "know" what the suffering in its bodily form is and how and why it is taking place.

On Descartes' communicational view, all that information pertaining to the how

and why of bodily suffering is screened off. The mind doesn't have the access to the relevant information about the agentive nature of the body. Of course, the mind can learn information *theoretically* from an anatomy textbook. But the point here is that in Descartes' theory is that the suffering in the mind is not an *expression* of the physiological tendencies which are disturbed and inhibited. The suffering mind is united to the suffering body only by means of a signal that engages and agitates the mind.

Later, we see that Spinoza makes a case that in order for a cognitive being to be truly at one with its body, those physiological tendencies must be reflected in the mind's cognitive structure.

1.5.5 Pain, Sadness and Harm in Mind–Body Communication

There are two requirements for what a sensation of pain should do for the mind. First, it should tell the mind that the body is unwell. Second, it should instruct the mental self that it itself has been hurt. Normally, when my body is hurt, I immediately to think to myself "I'm hurt" or at least act in a way that presupposes that kind of thought. In the Cartesian theory, the functional goal of pain is to get the mind to recognize that it itself has been hurt when the body is hurt.

Remember that the function of passions, the reason why we have them in the first place is, that they make us look after ourselves. The passions force us to notice and consider our state of well-being and incline us to act for the good of ourselves. This way

we don't have to *reason to the conclusion* that we must care for ourselves.

Notice that there might be not be any need for passions if we did not have a body. In fact, we could not have passions since they are perceptions which have the body as their cause. The primary use for passions is that the mind is coaxed to take notice of the body and be receptive of the ways in which we care about the things that happen to the body.

The mental self is the supervisor of the whole human being. The functional goal of the pain is that it establishes in the mind a cognition of the sorts that "I'm hurt". That self-cognition is essential for the supervisory role of the mind. The reason why we listen so closely to emotions and sensations like pain is that they exert a certain force on the will. The will is not a body which can be literally moved by physical forces.

The force which the will listens to is cognitive. The strongest of the cognitions which agitate the will is the recognition of the good of the agent itself. Therefore, the most effective way to get the will act in a certain way is to make the will recognize is that the mental agent itself has been harmed.

The challenge with this kind of thought is that the mental agent and the body agent are separate in nature from one another. This would suggest that the mental agent cannot think that it itself is hurt when the body is harmed. Then the care that the mental agent has for the body agent is a sort of benevolence, akin to how parents look after their children with care. This I don't think is quite right for Descartes. For the mind and body are united to together as a whole human being, which should express an even more immediate species of care than between two persons.

Given the Cartesian theory, it is not trivial to get there. The mind doesn't automatically understand that when the body is hurt, I'm hurt. This is because the body does not have the same status in the self as the mental agent.

Descartes writes that from the point of view of the mind–body union sadness and joy are those which primarily make us relate to the body. By this he means that they anchor us to the good of the body. He says:

> "For it is only through a feeling of pain that the soul is immediately advised about thing that harm the body: this feeling produces in the soul first the passion of sadness, then hatred of what causes the pain, and finally the desire to get rid of it."[41]

The emotion of sadness is the cognition that some harm has happened to me, that I'm less perfect than before. Pain and sadness are not the same, according to Descartes. As we said before, pain is a signal for the mind that the body is weak or being damaged. Sadness, in contrast, is the mental self's recognition of its state of harm. "I'm hurt" is an expression of sadness. What Descartes needs then is that the bodily pain causes the sadness in the mind.

To get from the damage in the leg there needs to be something like the following series of links in place:

1. The body is damaged which is bad for it
2. The sensation of pain advises the mental self about the harm done to its body
3. The sensation of pain causes sadness in the mind

[41] See AT XI:137.

4. The mind is sad, that is, it recognizes that a harm has been done to it
5. Now I can say "I'm hurt"

Even though this chain of links looks innocent, it harbors the seeds of Spinoza's criticism of Descartes' view. The links 1 and 4 are not problematic because each agent is structured to pursue its own good. The body agent is an automaton which is by its nature acts to preserve its health and other perfections. Similarly, we can admit that the mental agent is oriented towards its own good.

The links 2 and 3 are the ones that are under suspicion. The mental agent and the body agent do not in virtue of their natures have the same ends. Therefore, Descartes needs an account of psychology where the body communicates with the mental agent. It is a special feature of the Cartesian account that the body needs to advise the mind that the body is harmed.

The sensation of pain seems to have a dual role. It both tells the mental agent that the body has been harmed but also that it tells that the mind that the harm in the body is a bad thing for the mental agent. There is a question about the connection between these dual roles: Why does pain cause sadness in the mind? Sadness is a recognition of something that bad that has befallen to the agent. The sense of causation Descartes is using here matters. We might think that this is simply an analogue of physical causation, such that heat in a metal plate will spread to the hand that touches the place. Similarly, we might suggest that the mind becomes sad because some badness inherent in the sensation of pain transfers to the mental agent itself. This could be simply discomfort that

follows the feeling of pain which is inherently unpleasant.

I don't think that is the full story. While there is a role for a non-cognitive enjoyment and discomfort in joy and sadness, it seems to me that Descartes intends them as evaluative cognitions, namely that the mind understands that something good or bad has happened to it.

If that is the kind of cognition that the sensation of pain causes, then the causation is also different. It is not just a matter of a certain agitation or discomfort "spreading" in the mind but that the mind cognizes that the harm in the body is bad for it.

Because the mind is structured to pursue its own good, there must be an extra factor which brings the good of the body within the good of the mind. That is what I have at times called the scope of the will, and the will being permeated with the body. I conclude that one of the principal tasks of the mind–body union is that the mind comes cognize the good of the body as its own good. That re-structuring of the will cannot take place through the essence of the mind as a thinking being, even when we conceive its essential powers as consisting both of the universal intellect and the self-determining capacity to will.

2 Spinoza's Criticism of Descartes' Mind–Body Union

2.0 Motivation

Spinoza dedicates a short discussion in the Ethics for the critique of Descartes' view of the mind–body union. This is somewhat remarkable considering that Spinoza rarely comments on the thoughts of other philosophers. Spinoza's explicit criticism of Descartes indicates that Spinoza's own view is in part a philosophical reaction to Descartes' view. Spinoza does not address and criticize the views of other philosophers in order to establish his superiority. Spinoza has made that clear when he said that his interest is not to point out the errors of others.[42]

Rather, he explicitly criticizes Descartes only because he is building on the philosophical terrain that Descartes has cleared. Spinoza genuinely regards Descartes as a penetrating and serious thinker when he says that Descartes "had firmly decided to deduce nothing except from principles known through themselves, and to affirm nothing which he did not perceive clearly and distinctly, one who had so often censured the

[42] See Spinoza's Letter to Oldenburg (numbered 2). Spinoza answers Oldenburg's question as follows: "Secondly, you ask me what errors I see in the philosophy of Descartes and Bacon. In this request, too, I shall try to oblige you, although it is *not my custom to expose the errors of others*. The first and most important error is this, that they have gone far astray from knowledge of the first cause and origin of all things. Secondly, they have *failed to understand the true nature of the human mind*. Thirdly, they have never grasped the true cause of error. Only those who are completely destitute of all learning and scholarship can fail to see the critical importance of true knowledge of these three points." (Emphases are mine)

Scholastics for wishing to explain obscure things by occult qualities."

By an occult quality, Spinoza is referring to a supposed real feature of the natural world which is postulated to explain some other real feature but which itself is unintelligible, i.e. has no rational explanatory content.[43]

Spinoza continues by saying that it is surprising that Descartes came to advocate a view which postulates an additional explanatory factor, the mind–body union, which is an occult quality exactly in the sense that has no explanatory content. By saying that, Spinoza wants to signal a crucial junction where he parts from Descartes' view of the mind.

Whatever in Descartes' view led to the postulation of the unintelligible notion of the mind–body union must be revised. This goes back to Spinoza's claim earlier in the Ethics where he promises that his view of the mind gives us a clear and distinct, i.e. rationally intelligible, notion of the mind and what it is for it to be united to its body.

Before we proceed in examining Spinoza's criticism, we should note briefly why understanding it matters for our overall project. Our contention is that *the Ethics* as a work is intelligible mainly for the students of philosophy who have adequately mastered Descartes' philosophical machinery. For that reason, Spinoza's criticism of Descartes merits close reading if only for the purpose of understanding Spinoza's own philosophy!

[43] For more discussion about the use of the term during Scientific Revolution, see Hutchinson (1982).

2.1 Causal Interactionism Is Not the Main Problem for Spinoza

A misconception about Spinoza's criticism of Descartes is that its spearpoint is directed against the causal interactionism between the mind and body. Causal interactionism is the view that the mental substance acts on the physiological automaton (and vice versa) via a special type of causation arising from the mind–body union.

The notion of that kind of special causation is explanatorily problematic because there seems to be no common operative principle which constitutes what it is for a cognitive being to act on a material thing, or vice versa. That is at least Spinoza's analysis of the situation.[44] There are many specific ways in philosophers have tried to articulate what causal interactionism amounts to. We need not go into analysis of that here. Even while Spinoza acknowledges that the causal interactionism is a problem in Descartes' view, he does not seem to think that the causal interactionism is the fundamental problem.

The causal interactionism is only a symptom which arises as a result of a deeper problem. This deeper problem is the unintelligible, "occult" hypothesis of the mind–body union itself, which Descartes postulates. The difference between the interaction problem and the unintelligibility of the union was clearly recognized by Spinoza. He starts by criticizing the notion of the union which Descartes provides. Then, in a separate section, Spinoza brings up the other problem of how the will can move the pineal gland and vice

[44] See Preface to Part 5 of *the Ethics*. "[…] since there is no common principle (*ratio*) between will and motion, there cannot be any comparison between the power or strength of the mind and body, and consequently the strength of the latter cannot possibly be determined by the strength of the former."

versa. Even there the discussion concerns the problem of providing an intelligible explanation of how *particular* acts of will are united to particular physiological behavior in the brain. Only after identifying that more localized concern, he points out the general problem that there is no common principle (*ratio*) between the will and motion. He argues that because there is no common principle, there cannot be an intelligible way in which the mental forces can be "stronger" than the bodily forces.

Even there Spinoza has a more specific concern in mind: He is objecting to Descartes' view that the mind is engaged with the body in a kind of tug-of-war over the agentive control of the whole human being. His criticisms are not therefore directed against the general problem of causal interactionism between the mind and body. At most, one of those criticisms presupposes that there is a general problem.

Even if Descartes would manage to justify or provide grounds for a general account of how mental and physiological things could causally interact with one another, that one general possibility would not provide a full explanation of what it is for *this* mind to be at one with *this* body. The notion of mind–body union is introduced as an explanatory factor that unites a particular mind to a specific body so that they together compose a whole human being. It is this notion of the union between two particular but independent beings that is at issue.

2.2 The Mind's Nature Is Too Different from the Body's Nature

Spinoza's main criticism is that Descartes conceived the natures of mind and body too separate from one another. In the Preface to Part 5 of *the Ethics,* Spinoza says:

> What, I ask, does [Descartes] understand by the union of mind and body? What clear and distinct conception does he have of a thought so closely united to a certain little portion of quantity? Indeed, I wish he had explained this union by its proximate cause. But he had conceived the mind to be so distinct from the body that he could not assign any singular cause, either of this union or of the mind itself. Instead, it was necessary for him to have recourse to the cause of the whole Universe, that is, to God.

This little passage contains the essential ingredients of understanding Spinoza's criticism of Descartes' views about the mind and its union with the body. The main edge of the criticism is the explanatory power (or intelligibility) of Descartes' view of the mind–body union. In effect, Spinoza points out that Descartes has painted himself into a corner. The Cartesian view of the mind–body union is explanatory empty: It does not explain what it is for the thinking being to be united to a bodily automaton. Spinoza does not stop there.

He further argues that the source of Descartes' explanatory problem is in his notion of what the mind is. In Spinoza's view, the Cartesian mind is by nature "too distinct" from its body.

Consequently, Descartes must rely on an explanatory fiat of God's decree to provide a philosophical assurance that there is something real that unites *this* mind to *its* body.

When Spinoza says that he wishes Descartes had explained the mind–body union through its proximate cause, he is talking about the explanatory content of the union. For

Spinoza, to explain a thing's nature is to give an account of what it is to bring about that thing and what are the causes that operate the thing in question. For example, to give an account of what an individual human body is, one must grasp that the way efficient causes bring together various patterns of physiological activity into a stable, dynamic system that constitutes that body.

Descartes has made it clear that neither the mind nor the body is the cause of the union, because he has separated everything that involves the body from the mind's essence and also conceived the body as an entirely physiological automaton.

For that reason, the cause that brings about the Cartesian mind–body union must be somewhere outside the mind and body. However, since Descartes does not recognize any other kind of substances aside from minds and bodies, there is no natural cause which could bring about the union.

Because there is no natural cause that could bring about the mind–body union, there is no explanatory content to what the union is. This goes back to Spinoza's insistence about that Descartes has not provided any clear and distinct conception of what the union is. Since there is no determinate manner of what it is to bring about the union through some natural cause, there is no explanatory content in claiming that the mind is united to this particular human body.

There is, in particular, no intelligible reality which constitutes what it is for the will to move this and no other body. Everyone correctly observes that there is a correspondence between my decision to move my hand and the physiological sequence of my hand rising. That observed correspondence and its accompanying phenomenological

experience of embodiment do not, however, give an intellectually adequate reason why the power of willing brings about *these* specific physiological sequences of activity in *this* human body and not, say, in the body of another person.

One can make the same point about the relationship between the body and the senses. It is not clear what it is for the sensory faculties to receive signals from this body only, and what it is for a specific motive sequence of matter to produce a specific sensory image in the mind.

To ensure that there is a unity between these particular beings and mutually independent beings, Descartes is forced to postulate there is some extraneous explanatory factor that constitutes what it is for the power of willing to be at one with this particular human body. The problem is that even though there is a clear explanatory need that the notion of the union serves, the notion of the union does not itself possess any explanatory content. Postulating that notion does not make us any wiser about the unity of the decision and the bodily sequence.

Descartes even admits the obscurity of the notion of the mind–body union in his letter to Princess Elizabeth.[45] He says that we have a clear *sensory* notion of the union, but our intellectual understanding of it is obscure. What he means by clear sensory notion is that the senses provide a comprehensive dosage of information about the effects of the union. He says that to conceive the union between two things is to conceive them as a single thing. For instance, when I sense pain, I perceive it in a body that belongs to

[45] Descartes' Letter to Elizabeth, June 28th, 1643, AT III:690.

me but the pain as a sensation belongs to me, the mind. An act of willing to move a hand similarly sensed to produce movements in only this body, and no other. The awareness of the decision to move a hand occurs always together with sensations of bodily movements. In the cases of both sensing and willing, we observe the mind and body acting together, as if a single thing.

However, all of these agreements are mere effects of the mind–body union—as Descartes maintains in the 6th Meditation[46]—which is why the intellectual notion is obscure. An obscure cognition is such that it does not exhibit any simple nature unifies all the information into a cognition of a single thing. Because sensory experience consists only of the effects of the union, not the union itself, Descartes maintains that the intellectual understanding of the union is obscure because we cannot grasp what the reality is that would underlie the apparent feeling or sensation of being at one with the body.

Because the notion of union has no explanatory content, i.e. has no nature which can be brought by natural causes, Descartes must resort to an explanatory fiat by God. Spinoza does not generally regard God as devoid of explanatory role. On the contrary, he views God as identical to Nature, the first causal principle. What Spinoza objects to is that Descartes' view requires that there is a God that is an agent who must will that this particular mind is united to this particular body. Descartes view is an invitation to filling explanatory gaps with Divine providence or other kind of end-based explanation. Because

[46] "[…] sensations of hunger, thirst, pain and so on are nothing but confused modes of thinking which *arise from the union* […]" AT VII:81

God is good and He creates a good universe, the mind is united to a particular body in just the right way.

The final issue is: What does Spinoza precisely mean when he says that Descartes conceived the mind to be "*so distinct from the body that…*"?[47] One could suggest that he is alluding to the Medieval theory of distinctions which Descartes used for expressing his metaphysical theories.[48] I don't think a formal theory of distinction is at issue here. Spinoza talks about the distinctness as if it were a quantity or a degree, whereas if he wanted to make a specific technical point, he would have used a more precise term. Spinoza uses quantitative terminology in order to make a rhetorical allusion to his earlier phrase "a thought so closely united to a certain little portion of quantity". Saying that a thought is "closely" united to a piece of matter sharpens our focus on the lack of intelligibility in a supposed reality that brings a cognition into a tug of war relationship with a piece of matter.

Spinoza is making a stronger, less technical point. He sees that in Descartes' theory the *natures* of mind and body are too different or separate from one another, i.e. not suitable on their own to form one being. There is no intelligible account of their nature such that one could understand how these two belong to the same being.

So, it is not just that the mind and body are not the same thing in relevant sort of way, but their natures are conceived in such a way that they do not as such form a unitary

[47] In Latin, it reads *adeo distinctam … ut*. This phrasing clearly indicates that the distinctness of mind from the body is a matter of degree or extent.

[48] There are at least three types of distinctions which Descartes would accept: Real, modal and conceptual.

being.

The error in the notion of the mind–body union is sourced in the notion of the mind. Spinoza contends that any problem that Descartes has with the mind–body union comes from the original misconception of what the mind is and what's its task is.

Central to the problem is that in Descartes' view the mind is an agent who has its own operative principle and agenda, namely the practical power of willing. That power renders the mind as an agent who occupies an independent stratum of causality. The actions of the mental agent can be fundamentally understood not just through its union with the body, but through the mind's nature as a being who exercises its own free decision making. The union with the body at best explains passions and sensory reactions. But even to make the emotional and reactive behavior intelligible one would have to provide an account of the mind as a decisionmaker who responds to those sensory messages.

Such a conception of the mind is especially problematic given that Descartes thinks that the body is an automaton functioning by its own physiological principles. For example, when there is a brain image of a loaf of bread in the body's vicinity and the body needs nutrition, the animal spirits in the brain determine the body to move towards the loaf and consume it. All of this happens due to the physiological structure of the body and its nervous system. Descartes conceives the body as a sort of hydraulic machine, except that the fluid that drives it is heat. He thinks that the body automaton is autonomously capable of appetitive, sensory and even emotive behavior.

We see this in animals, who according to Descartes do not have minds. An animal

such as a sheep reacts to the wolf by avoiding and fleeing the wolf. Whereas in the Aristotelian psychology that kind of behavior would be caused by the sensitive soul, Descartes' insight is that the physiology of an animal body is structurally so rich that it can be the cause of that kind of emotive behavior. It is not just that an animal body can behave *as if* it had a mind or a soul but that the machinery of the body has a sort of a well-being to it due to the functions and operations that constitute it. Therefore, the body is quite genuinely capable of reacting things that happen to it and taking care of itself.

Once one has started to think about the body as a physiologically complete system, it is hard to limit the explanatory expansion of physiology. Spinoza agrees with Descartes' that the human body is functionally autonomous. He even goes further that there is no activity in which the body needs "help" from the mind.

The source of problems in Descartes' view of the mind–body union was the attempt to combine the autonomy of physiological causes with the notion of a mind that is a separate agent who is still conceived to be controlling and assisting its body.

2.3 Specific Ways in Which Descartes' Mind is Too Distinct

In the following three sections, we explain and review some of the specific ways in which Descartes' mind is too distinct from the human body. These symptoms are not meant to supplant Spinoza's basic argument. Again, Descartes' notion of a mental agent whose essence is encapsulated away from its body leads to an extraneous and explanatorily empty notion of mind–body union. These symptoms are effects of the unintelligibility of

the union. They are not themselves unintelligible, but they derive a certain unnatural character from the underlying problem. By way of analogy, one could compare these to the sensible experience of embodiment which is not the mind–body union itself. Whereas Descartes points to sensory experience as evidence of the mind–body union, the symptoms should indicate that also various unnatural consequences follow from his notion of the mind–body union.

2.3.1 The Mind Is a Detached Supervisor of Its Body

The Cartesian account of the mind and body turns the mind into a supervisor of its body. Let us see how that turns out to be the case. First, the mind is not directly and primarily responsible for the activities of the body, because, as we saw, the bodily agent can perform most of its life activities autonomously. Consider the situation in which the body needs water. One would expect that it is the mind who initiates the water seeking behavior, and that the bodily movements of going towards the water are outer expressions of an inner mental trying. The Cartesian theory claims, however, that the course of action has already been determined physiologically.

What can the mind do? There seem to be three possible ways in which the mind can enter into bodily agency: The mind can consent to an action proposed by the bodily senses, it can refuse go along with the body and intervene, or it can think creatively about the situation and re-orient the body's trajectory of action to a new direction. In all these options, it seems that the mind's agency is detached from the body's agency. The mental

agent turns out to be an outside intervener in the activities of the body.[49]

The mind's supervisory role is best understood by examining the will and its relation to the body. The will is the mind's agentive faculty. In its practical[50] use, the power of willing is directed towards the pursuit of good. Whatever the mind chooses, it must be presented as good.[51] This sets an important general constraint on the mind's relationship to bodily agency: the will as a faculty is universal directed towards the good, rather than towards particular actions or particular goods. This leads to the following consequences which will make it clear why I called the Cartesian mind a "supervisor" of its body.[52]

Since the mind wills a bodily action only insofar it appears to be good, the mind's decision targets the good, not the bodily activity as such. For example, when the body lacks water, the mind is not directly involved in bringing about the body's activity of seeking water. The body as a physiological system is already internally determined to seek water. Instead, the mind's role is to consent to the act of drinking water as bringing about some good.

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[49] In a letter to Regius, December 1641, Descartes does assert that the mind and the body form a whole human being. However, the concrete details of how the mind and the body act together—worked out in *The Passions of The Soul*— reveals a less immediate and more fractured relationship between them.

[50] See Descartes, *the 4th Meditation*, AT VII:57. There is also a theoretical of use of the will in affirming, denying, or refraining from judging, but I will not focus on that here.

[51] "[…] the will tends only towards objects that have some semblance of goodness." Descartes, AT XI:464

[52] Alanen 2016 views the Cartesian mind as an exerciser of the faculty of will and emphasizes the centrality of good for the life of the mental agent. This contrasts to the interpretation according to which the thinking being is principally a conscious subject.

The supervisory role of the mind is apparent from Descartes' account of the passions.[53] Passions and internal sensations are both perceptions and agitations of the will.[54] They are perceptions because they present something to take place either in the body or the mind. In effect, passions are cognitive symptoms, telling us about what is wrong with the body. For example, when I am in pain, that sensation indicates to me that the body or its part cannot handle the stress it is undergoing.

Second, passions are agitations of the will because they move the will towards some action. The function of passions, according to Descartes, is to make the mind to want and consent to those things which are good for the body. Therefore, in addition to being a symptom, the sensation of pain prompts me to consent to the action which the body is prepared to perform automatically from its physiological structure. A pain recommends a certain action for the mind, e.g. "my hand is hurt, protect it" or "taking my hand off the hot stove is a good idea". Since the body is largely operationally independent, the *raison d'etre* of passions is to facilitate the *supervisory action* over the body.[55]

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[53] Brown 2006 argues that Descartes' mind–body union cannot be understood without going through the details of how the passions and sensations work. Instead of looking just at *Meditations* one has to look into Descartes' *Passions of the Soul* for guidance.

[54] I count internal sensations such as pain, pleasure, thirst and hunger among the passions for the purposes of this essay. Descartes makes no fundamental distinction between them, saying that anything that moves the will is a passion. Passions proper, e.g. anger, affect the will most forcefully.

[55] "[The passions] dispose our soul to want the things which nature deems useful for us, and to persist in this volition; and the same agitation of the spirits which normally causes the passions also disposes the body to make movements which help us to attain these things." Descartes, AT XI:372

Another formulation of the same idea is: "[A passion's] natural function is to move the soul to consent and contribute to actions which may serve to preserve the body or render it in some way more perfect." Descartes, AT XI:430

The supervisory role of the mind comes with a superficial cognitive relation to the body. A pain as a symptom and as a signal for action does not tell much to the mind about what the underlying condition of the body is. The body is presented as a source of requests for action. The mental agent is a supervisor in the sense that its role is to manage the direction of the bodily life based on the signals it receives from the body.

2.3.2 The Mind and Body Are by Default in an Active–Passive Relationship

Another oddity of the Cartesian view is that the mind and body are by default engaged in a perpetual tug of war. Whenever there is a situation where the mind and body are co-involved, one of them must necessarily be the agent and the other must be the patient of that activity. In the case of passions and sensations, such as fear, anger, and pain, the body is acting on the mind and moving it towards consenting to help the body. In converse, when I will to move a limb, or to stop myself from eating too much, the mind is acting on the body and the body is passively receiving instructions from the mind.

This conception of bodily agency is unnatural, because it maintains that the mind and its body are necessarily and by default in an active–passive relationship. The basic case of human agency is that the mind and body are either active or passive simultaneously. Suppose, for example, that the mind feels pain. Being in pain is an attack on the mind's agency, because the sensation of pain disturbs the mind's capacity to function. According to the Cartesian view, the body is active because it signals to the mind that it is weakened. This is unnatural due to two factors: First, one should think that when the mind is in pain the body is simultaneously fundamentally passive, i.e. the

agency of the body is being inhibited. Second, the mind is the patient of pain for the wrong reason: The mind should be passive insofar as the external disturbance acts on the human being. On the contrary, the Cartesian theory dictates that the mind undergoing pain is passive because its body is acting on the mind. A more natural theory of passions would have the form where the sensation of pain expresses an external intrusion on both the mind and body *simultaneously*. Descartes' theory has no way of expressing that intuition.

Similarly, one would expect that when the mind is active, the body is also active. For example, when I'm mentally trying to reach a can of tomato juice on a high shelf, the body is simultaneously active. But in the Cartesian theory that act of the mind has the body as its patient.

It seems that the only way that the Cartesian mind and body can be simultaneously active is when they are both independently performing some unrelated activities of their own.

2.3.3 The Contingency of the Mind's Relation to Its Body

If we consider the mind's essence as a thinking being, there is room to ask the question: Which of the bodies existing in Nature is my body? The nature of the thinking being does not intrinsically specify what it is for this body to be my body. Therefore, the relationship of the mind to its body is contingent in this way. There is a fact of Nature instituted by God which dictates that the mind is united to this body and not others, but that fact does not arise from the nature of the mind itself.

One could be tempted to say that my body is that body to which I'm uniquely cognitively related to. For example, this body is my body in virtue of me feeling pain in this body and not in others, or in virtue of only this body responding to my acts of will. But that way of thinking hides an error at a deeper level: my body would be merely a special object of mental activities. If that were the case, then one could say that the status of body ownership is contingently changeable. If some other body were to satisfy the same relational conditions as my body does at present, then we should count that other body also as "my" body.[56]

There is a second problem which characterizes the mind's contingent relation to its body. Since the will pursues the good in general, it is not intrinsically directed towards the good of any particular thing. Therefore, the mind is not *by nature* determined to care about the good of its own body as opposed to the welfare of other bodies. The mental agent is analogous to a doctor who by his profession aims to cure illnesses in any patient without preference. Since the mind's nature as a thinking being does not supply the special status of this body, that status must come from something external to the nature of the mind.

The issue of care also reveals a way in which the mind is not immediately related to its body. Consider the following natural way of thinking about the care we have of our bodies: When I feel pain in my burned hand, I will try to heal the hand because it is *I* who

[56] Strawson 1996 p.101, makes a similar criticism against what he calls the Cartesian view, though his general viewpoint differs greatly from Spinoza's framework.

is in pain. I care for my body because the body is *me* and its needs are *my* needs.

Descartes' mind–body theory distinguishes between the functions of pain and sadness in a way that conflicts with the above intuition.[57] According to him, the function of pain is to present the body as weak, whereas the function of sadness is the recognition that something bad has happened to me—the mental agent. Because the mind and the body are separate agents, weakness of the body does not as such imply that harm has been done to the mind. Descartes's account of the mind does not explain what it is for the mind to transition from regarding the body as weak to regarding that something bad has happened to the mind itself. Therefore, the Cartesian mind seems to lack the kind of immediacy to its body that enables the body to be within the sphere of self-care. The relationship is analogous to the way a mother cares about her child. Even though the relationship might be intimate, the Cartesian mind cares about its body as a separate thing. [58]

In Section 1.5.5, we discussed that there needs to be a link between the weakness in the body and the harm done to the mind. The role of the union is to ground the sensation of pain as a signal from the body to the mind. From Spinoza's point of view, it is unnecessary that that there is a step between the weakness of the body and the harm that the mental self feels. These should be the same thing if the mind is to be truly at one with

[57] See Descartes, AT XI:430.

[58] Spinoza thinks that there is no such distinction between pain and sadness, both are inhibitions and disruptions of our agency. We just call some sadness a pain when it relates to some part of our body, and sadness is a term for a general background feeling.

the body.

In Spinoza's view, then, there is no fundamental functional difference between pain and sadness. In Descartes, they have different functional roles since the first informs the mind that the body is harmed and the second consists in the recognition that the mind has been harmed. To unite these two violations of good, Descartes must postulate an underlying principle of unity of mind and body. The principle of union determines that there are sensations of pain. Those sensations are communications from body to mind which perform two roles simultaneously: They tell the mind that the body has been harmed and that the weakness in the body is bad thing for the mind.

3 Spinoza's View: Mind as an Understanding of the Causal Structure of its Body

3.0 Motivation

In the previous chapters, the argument was that Descartes' view of the mind–body union and consequently the metaphysical view of the human being is what I called the two-agent view. The mind and body are both agents which operate simultaneously, in real time, according to their specific (and quite different) principles of behavior.

Descartes' view encounters difficulties when one tries to understand what it is for the general and autonomous thinking being to be *at one with* the human body which has a complex physiology thoroughly determined via particular causes. The notion "at one with" is a shorthand for a number of aspects of the mind-body union, which we

introduced in Chapter 1. It refers at the same to what it is for this mind to be united to this body, but also to the explanation of the agreement between the mental and physiological states.

Descartes bases his account of the human mind on the notion of a thinking being, an intellectual substance. The term "substance" refers to the mind's status as a *separate and independent* causal principle. In order to be preserve that independent status, the mind's essence must be conceived to be only *accidentally* related to its body. This kind of essential independence of the mind are reflected its powers: the universality of the intellect and the possibility of a self-determined pursuit of goods that are original to the mind.

The task of the Cartesian thinking being is to be a universal and autonomous thinker. Universal, since the intellectual faculty has no particular use or object. Rather, the intellect engages with any subject matter which the thinking being judges to be fit for understanding. This intellectual faculty is tied together with the other power of the mind, the will. The autonomous power of willing is an equally significant reason why the mind—as an independent[59] thinking being—is not related to its body in any particular or necessary manner. The will is the power of free decision and pursuit of the good. It is a

[59] By purely cognitive, I mean that mental activity that is, at its basic level, understanding, the grasping of the nature of an object. It contrasts to conscious sense perception which is impure in the sense that a mere image entity existing in the mind, unless it is interpreted by some background understanding, does not grasp the nature of any object. Descartes view of the mind's essence is purely cognitive in the sense that sense perception is an extension or an appendage of the intellect. See Chapter 1. Spinoza believes that sense perception is a restricted or partial form of understanding. The term "purely cognitive" also contrasts to anything non-cognitive, e.g. force or

radical causal source for two reasons. As a free power, it can determine itself. Second, the will is directed towards and led by its good, such as God, Scientia, generosity and love. Descartes thinks that the orientation towards the good makes the intellectual being entirely different from its body. In contrast, the human body as an automaton does not properly pursue any good, because there is no room for a metaphysical good or end-based explanation within Cartesian mechanistic physics. The only "good" of the human body are its natural tendencies of self-preservation and optimization of its life functions.

Spinoza agrees with some fundamental commitments of Descartes: First, there is a distinct reality to cognitive life that is not explained solely in terms of motion of extended matter.[60] The cognitive power in ideas Spinoza thinks that the power of understanding, or the intellect, is distinct from the physiological power of motive tendencies in extended matter. An idea—an act of understanding—has the distinctive feature of reaching past itself to an object, whose nature it grasps. Cognitive activity is driven by understanding. Understanding the nature of something leads the mind to understand what follows as an effect from the antecedent nature. That intellectual formation of ideas is based on a true idea acting as a cognitive resource for further understanding. Cognitive determination in ideas does not on the brute, unthinking force of bodies.

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[60] According to a common interpretation, Spinoza holds a mind-body identity view. Notably, Della Rocca 1996, pp. 8–9 and 118 argues that the mind and body are identical in the sense of a modern token identity theory. The reason why, according to Della Rocca, the mind does not act on the body, even though they are identical, is semantic opacity of explanatory contexts. However, it seems spurious that Spinoza would think that the nature of things and causes depends on the context of a *description*. Even though the suggestion is interesting, in Chapters 3 and 4 I provide an alternative reading which maintains that cognitive activity is by nature different from physiological activity, but that the mind and body are still the same thing in a specific way.

We should not that Spinoza is generally suspicious of phenomenology and introspection.[61] Hence, his commitment to the special nature of thinking does not arise from a first-person assessment of how the mind seems to be or feels like from the point of view of a thinking subject. In fact, I believe that he tries to explain or subsume the individual, human perspective into a purely objective, rationalistic framework.

The second thing that Spinoza agrees with is the sophistication and causal adequacy of the physiological structure of human beings. Even though a lot of bodily activity is influenced by external causal stimuli, the human body is a complex organized system that can take care of itself. The principles and causes that determine physiological aspects of human activity are thoroughly physiological. He goes much further here than Descartes. He boldly emphasizes that the human body is so complex that his contemporaries have no notion of what the human body can do merely from its physiological structure. Therefore, he saw no reason to postulate a separate mental *agent* whose task is to impose cognitive supervision over physiological activities. Spinoza as it were cognitivizes the human body: Human beings can build temples and designing ships solely through the complexity of their physiological structure.

Spinoza's disagreement with Descartes is in his solution to the mind-body

[61] Some have taken a different approach in thinking that ideas in Spinoza are conscious states. For instance, Garrett (2008), pp. 8–9 argues that being conscious is identical to being an idea, so in that frame of interpretation the mind–body relationship should be principally understood as awareness of one's body and its states. Marshall (2013), pp. 117–119 develops Garrett's view in saying that consciousness is simply affectivity, so that the mind is constituted by consciousness of physiological states in which the body is being affected in one way or another. However, Marshall does not think that every idea has to be conscious.

problem. Spinoza rethinks the cognitive structure and basic operations of the mind. The problem in Descartes' view was that both mind and body were conceived to be agentive centers which are compounded to form a whole human being. As I explained, Spinoza does not give up the real distinction between cognitive and physiological activity. Instead, he gives up the notion that the mind and body are two separate agents which they are internally determined to proceed on their individual paths of action, and which must communicate with another in order to synchronize their respective inner states.

Spinoza's mind is not an agent in the sense of being a sui generis causal source that realizes its agenda using mental faculties. Instead, the mind is a cognitive structure consisting of cognitive activities. The mind is united to its body because the mind's internal cognitive structure agrees with bodily states. Similarly, the human body is not a substance either, but a complex dynamic structure of causal tendencies.

Spinoza makes two main philosophical moves: The first is to conceive the understanding as the sole of the task of the mind. As Spinoza says very clearly, "there is no other power of the mind than the power of thought and of forming adequate ideas [--]".[62] The second philosophical move is that the human mind is a cognitive expression of a particular object, the nature of the human body. What this means that for each individual mind there is a particular, physiological subject matter which structures the cognitive activity of that mind. In another words, a mind consists in an internal cognitive model of its body's nature. The internal model of the human body is not consciously accessible to

[62] See *Ethics*, 5p4s.

the mind itself, but rather it is a cognitive principle for the formation of perceptions and mental actions.

Because the mind's activity consists only in understanding, the mind is a fellow travel traveler of its body. One can characterize Spinoza's view by a slogan that the mind lives the life of its body, but cognitively. More precisely, merely by engaging in its task of understanding, the mind generates ideas which express what its body is doing and what is happening in its body.

Spinoza adopts a radical version of intellectualism to make the mind–body union tractable. Since the mind's sole basic power is the formation of true ideas, it has no agenda of intruding into the causal order of physiology. In effect, Spinoza demotes[63] the ontological status of the human mind. The mind is not an independent causal source. That amounts to at least two claims 1) there is no absolute power of willing by which the mind could determine itself freely 2) the mind, i.e. the intellect, has a determinate cognitive structure which expresses the nature of a particular body.[64]

Spinoza, in contrast, holds that the cognitive activity is essentially united to its body because the mind itself is a cognitive act, or an act of understanding. That is to say, the mind is cognitive activity which has a built-in understanding of a particular physiological structure. A third way to put the same is that the mind consists of one very complex ur-thought which grasps the nature of a particular body, the human body.

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[63] I borrow this term from John Carriero's lectures. In *the Ethics*, the notion of demotion is expressed by 2p10, where Spinoza argues that the mind is not a substance as most of his predecessors held.

[64] Claim 1 is addressed by Spinoza in 2p48 and 2p49 and claim 2 already in 2p11.

Individual thoughts and perceptions, such as the human mind seeing a sunflower on a nearby table, are modifications or variations within that ur-thought of this particular human body. Seeing and other forms of sense perceptions are by-products of the mind's built-in understanding of the workings of the human body. Mental decisions on the other hand are products of causal thinking drawn from the internal model of the human body.

One could compare Spinoza's view of the human mind to an intellectual point of view, in contrast to those views of the mind who think that the finiteness and situatedness of the human mind is best explained it in terms of the subjective point of view of consciousness. In Spinoza's view, the built-in understanding of the workings of the human body constitutes a particular *locus* for understanding. I call it an intellectual point of view because the nature of this particular human body is as it were the point of origin for cognition. The mind begins its cognitive task from innate understanding of a particular body. Mental states such as perceptions and mental decisions are modifications or extensions to that depend on that original understanding of the human body.

3.1 Short Overview of the Thesis of the Mind as an Act of Understanding, with Examples

Spinoza famously claimed that the mind itself is the idea of its body. That view is best understood through the following slogan: the mind lives the life of its body, but cognitively. Whereas the body as a physiological system produces its activities from its motive causal structure, the mind is an understanding model of that causal structure. The

mind's task is to cognize what its body does by causal, inferential thinking that draws upon the understanding of the body's operative structure.

Spinoza's view that the mind is an idea would seem quite strange if one holds the view that an idea is a mere inert symbol (e.g. a proposition), which becomes a cognition only when a further mental act employs it. Spinoza's intent is better understood from the perspective that ideas themselves are intellectual acts. The mind as an idea is indeed doing something. It is actively cognizing what is true of its object, and also what follows from its understanding of its object. It is not just statically representing the body, e.g. an image of the body resembling the anatomy of the body.

The view that the mind is an idea can be paraphrased as saying that there is only task for the mind and that is cognition of what is true. The mind itself is identical to the constant mental activity that pursues that task of cognizing what is true. So, mental life consists solely in intellectual operations which move from what is understood to be true to some further true cognition.

The second component of Spinoza's thesis is that the mind is an idea <u>of its body</u>. Again, ideas are intellectual acts, i.e. acts of understanding. A successful act of understanding produces in cognition the nature of its object. By "producing in cognition", I mean that an act of understanding is a kind of a modeling where the cognition is not only true of its object but also that the mind is able to produce true thoughts, i.e. inferences, based on its internal cognitive resources. Suppose, for example, that I must reassemble my motorcycle after having repaired it. If I understand how motorcycles are structured and how they operate, I'm able to truly infer which part goes where just based

on my internal model of the motorcycle. The novice cannot infer the order and location of parts because his mind is not producing the structure of the motorcycle in cognition. Instead, he needs to rely on a manual against which he can check his guesses.

In Spinoza's view, the mind as an understanding of its body is somewhat like the master mechanic who has an understanding of the car's operation and construction. The main difference is that one draw distinction between the mechanic and her understanding of the car, whereas one cannot draw a distinction between the mind's cognitive structure and its understanding of the nature of the body.

Spinoza's fascinating insight is that the mind's cognitive structure is a true idea in the above sense: The mind is internally structured so that it can live the life of its body, not in flesh but through cognitive modeling. This gives us an answer to what it is for the mind to be united to the body. This mind is the mind *of* this body because the mind's cognitive structure is an understanding of the operation of the body.

This is more approachable for the modern reader if we translate it so that the mind's task is to model the nature of the body. I consider that a very accurate and helpful way of explaining Spinoza's view.

The task of the mind is to live cognitively the life of the body. The body is a physiological system whose causal structure produces actions which sustain and regulate that system through manipulation of its environment. This means that all physiological, bodily activity can be understood through the causal structure of the body or through the co-involvement of other bodies with the causal structure of the body.

The mind lives the life of the body insofar the mind's mental states are cognitions

of what the body is doing. This calls for a conceptual revolution of the roles of mind and body in human life. For example, the Cartesian view about mental agency is that decisions are signals from the mind by which the mind exercises command over bodily processes. Similarly, the passive sensory states get re-explained: the Cartesian story of what pain is that the feeling of pain is a somatosensory communication where the body acts on the mind, "telling" that it is not doing well. In Spinoza's view, there is no signaling between mind and body. Rather, decisions and sensations are cognitions where an action is either inferred from an internal model of the physiology (in the case of a decision or a volition) or the cognitive model of the body gets updated by incoming information about the state of the body (in the case of a sensation).

An obvious explanatory challenge with a view like this is that it seems that the mind has no true agency and that there is no true passionate engagement in mental life. One could express the worry like this: If volitions and feelings are cognitions of bodily life, isn't all mental life a mere observational activity in which all activity and passion is at best vicarious. A step further: If one compares the real weather to the meteorological model that tracks it, one cannot say that the model is doing anything in the same sense that weather phenomena are doing because they are driven by causal forces. For example, a cloud front in the model is only "moving" because of the mathematical formulas of the model predict a certain state for each increment in the time variable, whereas the physical cloud front moves due to the sun heating the atmosphere and so on. One could express this same worry about the idea that the task and nature of the mind is to be model (i.e. to be an understanding) of the causal operation of its body.

In the rest of Chapter 3, I provide an explanation of why that worry is unfounded. There is a real activity, albeit cognitive, which the mind is doing. And there is a real difference between passivity and activity in the mind that separates perception from action, rather than those being just species of "observing the body". Finally, the mind is capable of being affective and passionate about things that happen to it even though the activity of the mind is only cognition. Of course, the ups and downs of cognitive life are not grounded in some special faculty of feeling or passion which we would like to naively perhaps postulate to exist. Nonetheless, Spinoza's theory can explain how the mind can suffer and be uplifted.

What drives the mind forward is causal thinking or causal inference. The agency of the mind is when it infers from its present mental to the following future state. These mental states are states of the body model, or cognitions of its body. The causal thinking is based on an innate understanding of the causal structure of the body. Because the life of the body is driven forward by physiological activity, tying the mind's agency to physiological causal processes is the only possibility for keeping mind and body in agreement.

The basic schema of Spinoza's view that the mind is the idea of the body is presented in a simple form in Figure 3-1 below. It follows the course of the explanations given in the present section.

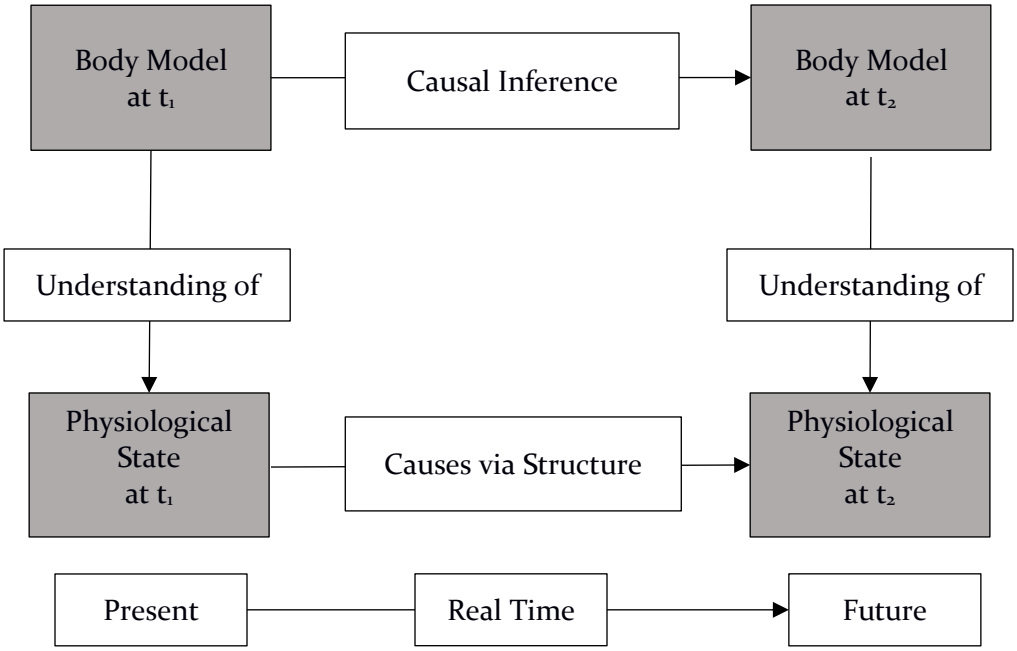

Figure 3-1: Simple Illustration of the View

3.1.1 Cognition of Action Example

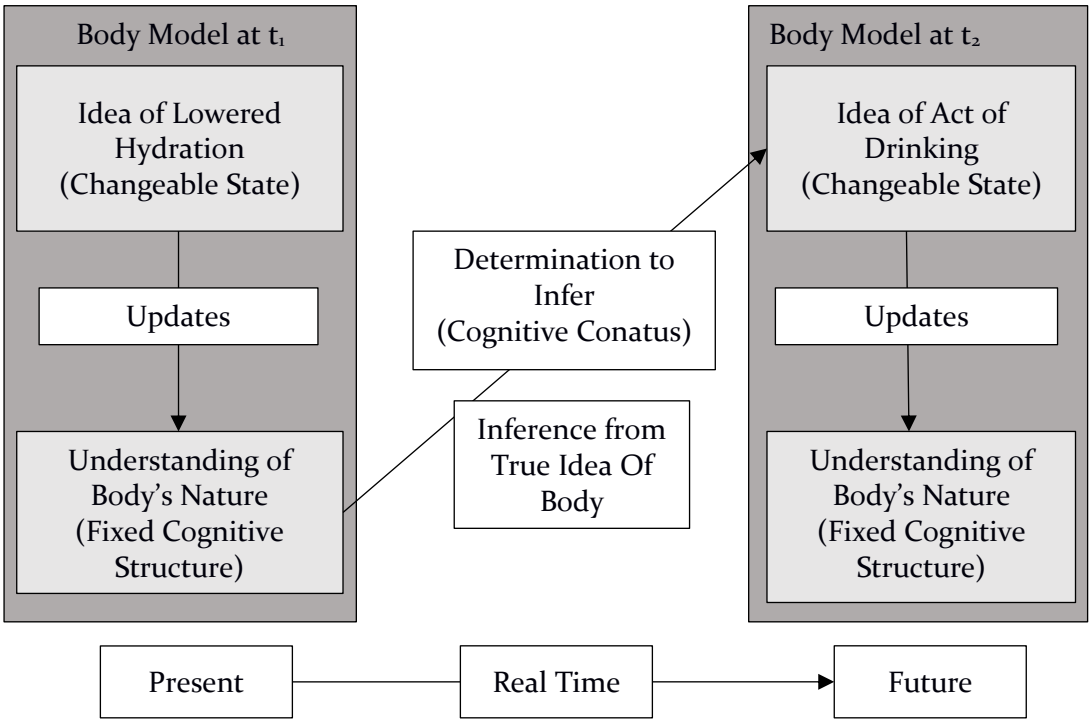

Figure 3-2: Cognition of Action

Now, I turn to some schematic examples of how Spinoza's view of the mind as a cognitive model works. These are meant to be preliminary examples, since the full theory of Spinoza's view is yet to detailed. Nevertheless, they guidance for the reader for navigating through the more explanations in Chapters 3 and 4.

The first example is shown in Figure 3-2. Suppose that I decide to move my hand to grab a bottle of water on the table. One might initially think that if the mind is the cognitive of model of the body's causal structure, then the mind is merely observing what

its body is doing and not itself acting. If this is the right picture, one might worry that the mind is turning out to be a mere cognitive epiphenomenon. I think this worry is misplaced. Let me explain why.

In Spinoza's view the mental aspect of the decision to move my hand is a cognitive *act*. The mind acts when it cognizes what its body does when the body is internally determined to do something, such as reaching for a bottle of water.

Suppose that the mind is a cognitive model of the body. That model infers from its present state at T1 the state of drinking water at T2. That act of inferring is the mental decision itself. For the purposes of this explanation, we can abstract away what exactly the state T1 is and assume that the state at T1 is enough to motivate the mind. The motivation is not a feeling (as in a separate faculty of the mind) but rather that a state of the body model which is enough for determining the body model to change its inferences. This change in the determination of cognitive activity is what Spinoza calls appetite.

Now, the idea of the body consists of two components: idea of body's causal structure and ideas of the changes in that causal structure. The body model "knows how" to have an appetite because the determination to seek water is understood through the causal structure of the body, or which is the same, the appetite is a modifying state of the causal structure of the body.

The body model cognizes also how the appetite is carried out. Because the mind is a model of the body's causal structure, it infers from the cognition of its bodily determination the idea of its effect (the realization of the appetite in action). This might

include the understanding of how much the muscles must contract, the paths of the limbs, the sequence of movements of arms vs. fingers etc. The body model understands those things not in virtue of being a "picture" of everything that there is in the body. Rather, it understands a causal account of the causal structure of the body where the brain and the rest of the nervous system play a central, unifying role. Therefore, the understanding of the whole organism is the cognition of how the parts operate together.

In Sections 3.3, we explain more about what it is for mental action to be causal inference. In Section 4.3, we turn to what is the conative aspect of cognition, i.e. what cognitive determination and mental appetites are.

3.1.2 Example of a Passive Mental State

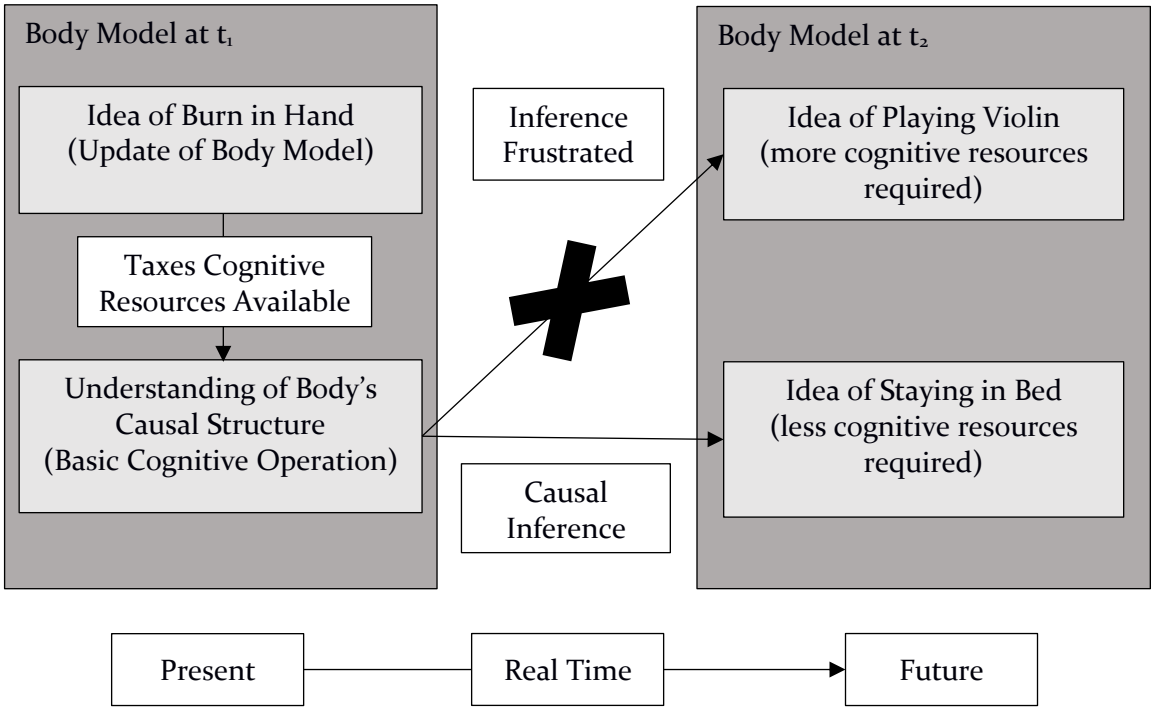

Figure 3-3: Passive Feeling of Suffering

Next, I explain Figure 3-3, passive feeling.

Suppose that my body is burned by fire. Now a Cartesian, pre-philosophical picture would have it that the feeling of pain in the mind is that the body signals to the mind that the hand has been hurt. In this way, the mind is acted on, or affected by the body. Contra Descartes, Spinoza does not think that the mind and body are in a fundamentally interactive relationship. Rather than being in some sort of tug of war, they operate together. So, he's going to look for a different account of the matter.

In Spinoza's view, suffering is thoroughly cognitive. Mental suffering is an inhibition and weakening of the cognitive system, i.e. the mind. The mind does not rely on a pre-packaged emergency signal from the body like in the Cartesian view. (The brain sending signals to the mind). Instead, Spinoza's mind interprets information about the bodily change through its internal, adequate model of the body.

Spinoza's theory relies on the fact that physiological damage or excessive stimulation inhibit the life activities of the body. The body must divert some of its causal power to heal and recover and thus it has fewer causal resources for doing the things it would be otherwise doing. The mind as a model of the body's causal structure is also a model of those life activities of the body. The idea of the burn is a modification of the body model. However, the mind does not just dispassionately register that such and such damage has taken place in the body. Whereas the body is losing its functionality and able to act less as a cause of its life activities, the body model is less able to infer the ideas of those activities.

Why does inhibition of causal inferences constitute mental suffering? These inferences or causal thinking are performed by the unconscious body model. Rather, the mental suffering consists in cognitive inhibitions on a primitive, unconscious level. This makes suffering different from the kind of conscious and explicit frustration that we experience when we are unable to solve a tricky calculus problem.

Instead, the body model is actively thinking towards future bodily actions using the understanding of the present state of the body as a cognitive resource. The idea of the burn ties up and inhibits these cognitive resources for causal thinking. The term

"cognitive resource" corresponds to in the text "the mind affirms less reality of the body".[65] There is less subject matter for the understanding to draw true thoughts from. Because the mind is now a model of a weakened body, the model cannot anymore in a truth preserving way infer all the ideas of life activities. The idea of the burn taxes the body model's causal thinking towards future actions necessary for life, the mind's cognitive stability and "organic" coherence is disturbed. This gives a cognitive account of why suffering shows phenomenologically as a kind of depression and confusion.

The material in this example is explained more fully in Section 4.4.

[65] See *the Ethics,* Part 3, General Definition of Affects.

3.1.3 Perception Example

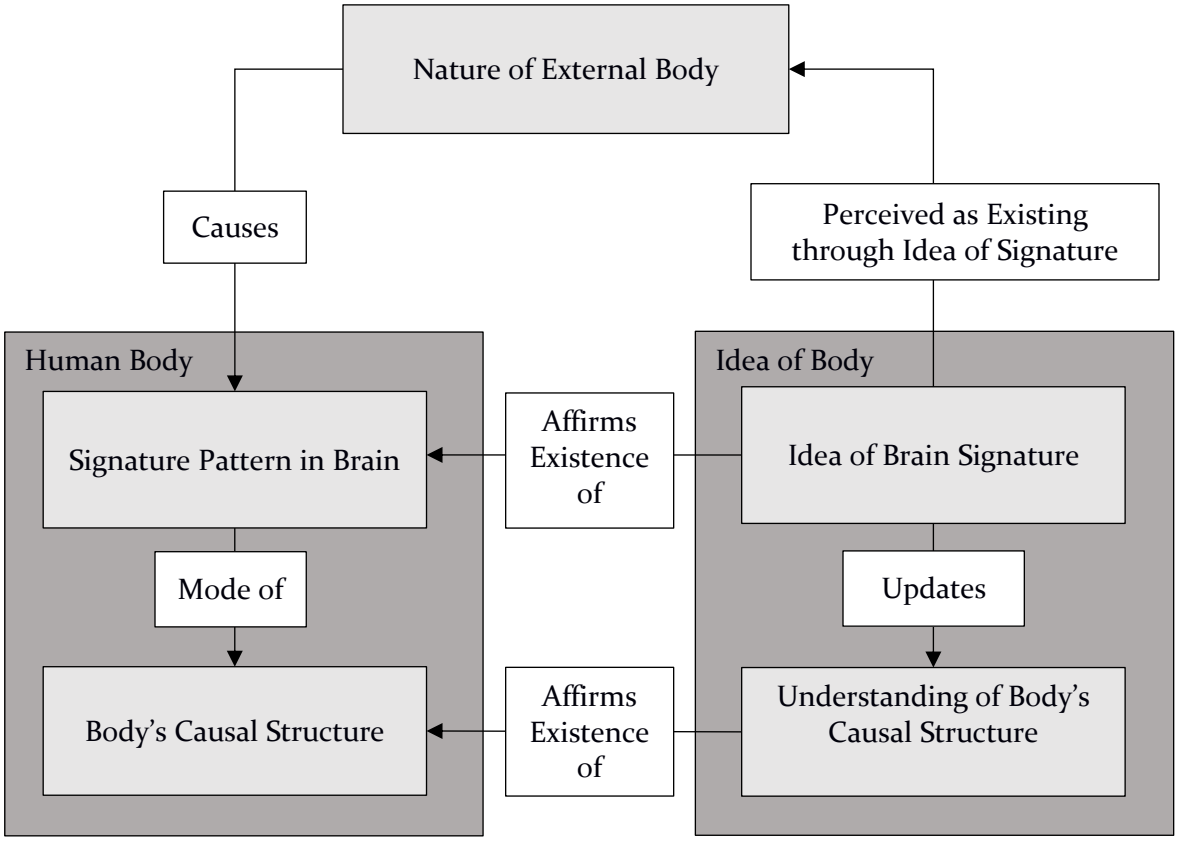

Figure 3-4: Sense Perception

Finally, we move onto Figure 3-4, concerning sense perception. This material is explained more elaborately in Section 3.4. The term "affirmation of existence" cannot be explained here, it is explained in Section 3.3.1. Despite these precautions, this example gives a good initial idea of how the view works.

One might wonder how the mind as a cognitive model of its body's causal

operation perceives external bodies and second, how those perceptions are distinguished from the body model itself.

First, the body model is an understanding of the invariant causal structure of the body, but that does not in and of itself tell anything about the environment in which the body is. Therefore, the understanding of the body's operation as a whole is distinguished from the states of the physiological system (or affections of the body as Spinoza calls them).

Now, the mind as an understanding of its body perceives other bodies precisely because it "knows how" the body operates. The visual system (eyes, nerves, and the brain) is a part of the body. When that part of the body is affected with a sensory trace from another body, the body model cognizes the presence of the other body from based on its understanding what a certain change in the body entails for the body's operation.

Sensory images are changes in the patterns of activity *within the brain* which is the operational nexus of the whole body. The brain's job is to orient the eyes and the head to track the other body that is seen, but also to prepare the body for, say, catching that other body if it happens to be a mosquito. The brain does all of that by first forming a kind of signature of the mosquito in the brain structure.

The idea of the brain signature of the mosquito updates the mind's internal body model. Because the mind is an understanding of the body's causal structure, it can read off the nature of the mosquito from the idea of mosquito signature in the brain. That new idea is the sensory perception of the mosquito. The perception of is not an idea of the mosquito *full stop.* That is because the mind only cognizes the mosquito through the

signature (or trace) its effects on the visual system. Therefore, my sensory perception of the mosquito is really an idea-of-mosquito-as-it-affects-my-body.

Spinoza does not comment exactly how accurate that sensory perception of the mosquito is. Instead, he emphasizes that we get a cognitive grasp only to the nature of the mosquito only to the extent our body's structure is receptive to the nature of the mosquito. Any errors in sensory perception are due to the limitations of the filters and sensors that are in place in the human physiology.[66]

The sensory images do not exist as mental items which are inspected by a mental homunculus. Rather, the ideas of images are modifications of the body model. The changes in the brain state which are sensitive to signals from external bodies change the body's behavior. The ideas of those changes in the brain are changes (or updates) in the body model. They are only informative for the mind because the mind is a model of the operation of the body. The mind uses sensory ideas only to infer the next state of the body model, whereas in the traditional account of the mind sensory ideas are material from which the mental agent can abstract information for the purposes of deciding where to move the body. In this way, a sensory idea is just a mode of body cognition, a cognitive map that extends the body model so that more intricate and far reaching ideas of actions

[66] See 2p35s. Spinoza writes: "[…] when we gaze at the sun, we see it as some two hundred feet distant from us. The error does not consist in simply seeing the sun in this way but in the fact that while we do so we are not aware of the true distance and the cause of our seeing it so. For although we may later become aware that the sun is more than six hundred times the diameter of the earth distant from us, we shall nevertheless continue to see it as close at hand. *For it is not our ignorance of its true distance that causes us to see the sun to be so near; it is that the affection of our body involves the essence of the sun only to the extent that the body is affected by it.*" (My emphasis)

can be inferred from the causal structure of the body.

Finally, one should wonder what the relationship of the mind as a model of its body is to our conscious, explicit thinking, e.g. when I'm diagnosing a broken bicycle. My diagnostic thought employs a model of the causal operation of the bicycle, which I use to understand what the bicycle does. Does this mean that my mind is equally a cognitive model of my body as it is of the bicycle?

The body model constitutes the essence of the mind, whereas the thoughts about the bicycle are perceptions of the mind. Their difference is that the body model is a principle of inferring from perceptions of what happens to the body to what the body does. Even though the diagnostic model of the bicycle reproduces the behavior of that body, that perceptual model is only derivative or secondary. In the process of being a cognitive model of its body's operation, the mind comes to perceive the external world as it alters and affects the physiology of its body.

3.2 The Mind as a Cognitive Model of the Causal Structure of its Body

3.2.1 Understanding and Adequate Ideas

Before we can understand Spinoza's view of the mind's nature, we must know what he means by understanding and ideas. Spinoza connects to those notions at a fundamental level. Cognitive activity is an idea when its internal structure is such that it counts as an understanding of a nature. There are many issues to unpack here.

Understanding, first of all, is the activity of grasping a nature. Grasping a nature is

a useful metaphor but it gets us only so far. A more accurate way of explaining what understanding is that it is an account. Something is understood once one is able to give an account of what that thing is.

Natures, or essences, are *loci of intelligibility*. By that I mean, that understanding is focused on causal structures that operate in Nature. Causal structures are thing-like, e.g. humans and trees. Spinoza thinks that those causal structures are distributed unevenly and locally in Nature. For example, a tree or a human being is a rich causal structure in the sense that various patterns of activity come together to form a more complex, but stable and unitary, operative structure. In contrast, an arbitrary "system" consisting of 100 cubic meters of open air in front of my building is not a causal structure, because the patterns of activity (e.g. speckles of dust blown by the wind) do not form a stable and unitary locus of causal activity.[67]

Because an understanding is an account of that local causal activity, its cognitive structure depends on the nature that is its subject matter. It is an account that captures the causes of how and why some particular nature operates as it does.

When I said the term "internal structure" of the idea, I'm referring to something distinctively cognitive. An idea does not consist of the object itself. As Spinoza expresses this: "The idea of a circle does not have a circumference."[68] The idea is a cognitive resource in the sense that having that idea enables the mind to have an understanding of,

[67] We will talk about physical things as *loci of intelligibility* more in Section 3.2.3.

[68] See TIE para. 33.

say, what a circle is, without the mind itself becoming circular.

Understanding comes in degrees. Spinoza uses the term "adequate" to refer to ideas which exhibit the higher level of understanding. The level of understanding which is possessed by a master mechanic is deeper and richer than the one possessed by her apprentice. The difference in the understanding is not just matter of the extent, but rather Spinoza thinks that the master mechanic differs from the apprentice in the variety of intellectual tools they use to understand their subject matter (e.g. the operative nature of a complex machine).[69]

In order to make distinctions between different levels of understanding, we should answer first the more fundamental question: What kind of an *account* is an idea? In *Treatise on the Emendation of the Intellect*, Spinoza specifies two conditions of what constitutes an adequate idea:[70]

The first condition is that an adequate idea expresses the how and why its object operates. Spinoza views the natures or essences of things as fundamentally causal. That is why grasping a nature is to grasp its causal structure, that is, the how and why of its material operation. This condition is that an understanding must be couched in terms of the actual physical causes that operate and produce the behavior of the target nature. [71]

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[69] See 2p43s: "To have a true idea means only to know a thing perfectly, that is, to the utmost degree. Indeed, nobody can doubt this, unless he thinks that an idea is some dumb thing like a picture on a tablet, and not a mode of thinking, to wit, the very act of understanding."

[70] See TIE para. 85. Strictly speaking, his topic in that treatise is the notion of a true ideas, but the conditions he applies are the same which uses to describe what constitutes the adequateness of an idea in *the Ethics.* The reason is that in *the Ethics* makes a further distinction between adequateness and truth.

[71] See 2d3 and 1a4.

That rules out certain kinds of superficial ersatz explanations. We will give an example of that but let us now see the other condition.

The second condition is that the context of causes in the object is reflected or expressed in a context of ideas that form the account (which is the main idea itself). The underlying point here is that an adequate idea is a *causal account* that is equally rich as the causal structure of its object. This condition works in two ways: A) internally and B) externally.[72]

The sub-condition A is that the context of causes can be internal. If there are a number of causal factors that come together, say, to form the operation of a complex machine, an adequate idea of that machine must express and preserve that the order and connection of those causal factors as they are in the machine.

The sub-condition B is that the operation of machine has also external causal effects, i.e. what kind of effects the machine has as outputs. An adequate causal account of the machine's nature must also be able express the ideas of those outputs.

Let us go through these conditions through an example which consist of three levels of understanding.[73]

Suppose that there is a master mechanic who understands how a complex machine, e.g. a car, operates. According to Spinoza, the ideas that the mechanic has of the machine constitute together a rich and detailed causal account of the whole operation

[72] See 1a4 and 2p7.

[73] These levels of understanding roughly correspond to the three kinds of ideas Spinoza explains in 2p40s2.

of the car. That account consists of local sub-accounts, such as *why* the combustion of air and fuel in the engine transmits power to the drive train. That particular sub-account has to be hooked together appropriately with the operation of the electrical system. As a result, the master mechanic is able to intellectually "see" why a problem in the electrical system is the cause of a specific malfunction in the starter engine. The idea structure in the mind of the master mechanic is thoroughly particularized in that it reflects the order and connections of the causes that operate the machine.[74]

The intermediate journeyman has some experience with the particular operations of the machine, but his understanding does not reflect how the local sub-systems of the car work together. The journeyman has to rely on universal rule-like principles. For example, he might understand the operation of the machine in terms of diagnostic rules such as if there is a voltage drop at some location of the car's electrical circuit, there must be either the battery has a low voltage or there is a draw somewhere in the circuit. He is here relying on what looks like a universal rule that is fixed on a known *common property* of electrical circuits. His understanding is limited because it relies on that common property instead of the particular causes that determine the specific problem in the machine.

The apprentice has the lowest of level of understanding. Let us suppose for the sake of example, that is understanding of the machine is based mostly on images of the

[74] This example should give a motivation what Spinoza says in 2p7. One might worry also whether this view of understanding is too demanding. Spinoza seems to acknowledge that in 2p11c. He recommends that readers should hold back their judgment before they thought through the whole theory of the mind he is proposing.

machine. He remembers for that a green colored wire goes always to the battery terminal marked with a minus symbol. He has a mental image of how the exhaust pipe connects to the engine. These are just some examples. The apprentices of library of these images can be quite extensive. That kind of person might even have a decent success of correctly diagnosing the problems in the car's operation if the problem happens to correspond to situations he has encountered before.

Despite their usefulness in many situations, the apprentice's ideas still do not constitute adequate understanding, according to Spinoza. The combination of images does not express the physical mechanism by which the parts of the machine form an operative machine.

The apprentice's understanding is also superficial because the images do not reproduce the rich context of causes. Suppose, for example, that the mind of the apprentice has a very detailed imagistic memory of the wiring of the electrical system. That image does not contain sub-accounts of the causal connections which explain what goes wrong if, say, the wiring is meddled with. In one situation, for example, a change in the wiring would cause a short-cut. In another situation, the headlights could stop working while the rest of the car works. Without further explanation, the mental images do not tell why that happens.

3.2.2 Understanding is an Intrinsic Feature in an Adequate Idea

An understanding must be organized internally so that it is a causal account of its object.

That intrinsic structure is the adequateness of an idea. Truth is the extrinsic correspondence between the idea's structure and the object nature. An idea, according to Spinoza, is not an understanding simply because it matches or corresponds to its object.[75]

We can adapt our previous example of the master mechanic to illustrate that intrinsic adequateness of understanding: she has a grasp of the car's operation in a way that does not rely on an external reference or a comparison to the object. For example, when she is assembling an engine, she understands the workings of the engine insofar as she can mentally place its parts into their place by a mental model of the causal operation of the machine. A master mechanic is able think through the organization of the engine by grasping how the parts *must* come together to produce a functioning engine. The novice, who does not understand the machine, must use external resource, such as a diagram or a look-up table, for guidance.

The master mechanic can infer or generate further true ideas about the causal behavior of the machine due his internal model of the causal structure of the machine. He can think causally about how the machine operates under changing contexts because his understanding of the machine is couched in terms of the very physical machine itself. The novice who operates with a rigid and abstract textbook knowledge cannot apply his limited understanding in those ways.

The master mechanic's understanding does not consist of images, symbols or other superficial features which externally refer and match the structure of the machine. Not

[75] See 2d4: "By an adequate idea I mean an idea which, insofar as it is considered in itself without relation to its object, has all the properties, that is, intrinsic characteristics, of a true idea [ideatum]."

that the master mechanics' idea of the machine is itself an extended structure existing in silicon or steel. Rather the understanding is adequate because it is structured in terms that exploit the physico-causal structure of the machine.[76]

Let us take again the example of a visual diagram of the machine tells the wrong kind of information about the machine in order to be a deep account of how it works. A good example of this is the wiring diagram in a car manual. That kind of diagram does indicate how the electrical parts are organized to describe a certain causally operative structure, but the chart itself is only useful to a reader who possesses an internal model of the functioning of electrical circuits. This is because the diagram is not couched in terms of what each part is, i.e. what is the operative principle of those parts. Thus, even if the wiring diagram shows the whole circuit and the correct connections of the parts, it lacks an account of how and why the local natures of parts come together to form an interconnected whole. It merely indicates the static "anatomy" of the circuit, but it does not teach what is a circuit, why there must be switches, what is current, what is resistance etc.

The above example of the master mechanic could be opposed on the grounds that it is mere know-how. That worry is arguably misplaced. Spinoza's view of the

[76] Huebner (forthcoming) argues for an interesting solution to the problem of mind-body unity in Spinoza. She reconciles together two theses: that the cognitive activity is fundamentally different from physiological activity, and that the mind *is* the idea of the body. She thinks that the fundamental difference between cognition and matter is saved if the notion of body is in fact two notions: the concept of "body" in cognition and the physical, extended thing existing outside cognition. In her view, then, the human body is the intentional object of the human mind. That intentional object is the cognitive sense of "body", not the physical structure itself.

understanding comes from his views about geometry. Understanding the nature of a geometrical object is to construct it out of the properties of the underlying space. He is thinking here along the lines of pure geometry, or synthetic geometry, where one starts the cognition of structures in the axioms that define the spatial framework. From there, the geometer works downwards using only the axioms as the first principles of inference. In this view, achieving an understanding of a geometrical structure is the same as cognizing how that structure comes to exist through the application of constructive inferences.

A crucial feature of geometrical thinking for Spinoza is that once the geometer has understood the nature of its object, the consequences one draws from that understanding are true. If we "look" into the mind of the geometer and inspect her ideas, we can see that they are internally organized so that there is enough cognitive material there to draw out further properties about the object. Compare this to the case where one would only receptively or perceptually cognize, say, a triangle. One would only have 3 line segments joined together at their ends. That itself is not an understanding, but rather a mute picture, which affords no true constructive inferences. The understanding of the nature of a triangle consists of the connections that one can infer from the triangle being a product of the underlying axiomatic properties of the space. The task of the geometer is to show how, for example, the sum of internal angles flows from those underlying defining principles of the nature of the triangle.

Finally, we should add an important note about how Spinoza's view of an idea differs from the pre-conceptions of what modern viewers might have about ideas. Spinoza

thinks that ideas are acts of understanding in that they are causal accounts of some nature which are formed by the mind. The modern, also perhaps intuitively appealing, notion of an idea is that it is *a way in which an object of thought is presented to a thinking subject*. This is a common model of an idea or a thought which arises from the metaphor of the relation between an observer and the observed, or the conscious subject and its object of thought. Since Spinoza thinks that the essential characteristics of an idea are intrinsic to it, there is nothing that requires it to be specifically *presented to* a subject. All he says is that "an idea is a *conception of the mind which the mind forms*, because it is a thinking thing." He even explicitly contrasts this to the way of thinking about ideas as perceptions where the thinker is receptively related to the object.[77] Ideas are according to Spinoza more like real definitions which generate or expressively construct the nature of their object. Because ideas are in this sense self-contained, they are independent of being presented to a subject.

That is not to say that an idea can exist outside a mind. Spinoza says that an idea is an action of the mind, which means that ideas must be formed. That action corresponds to the mind's cognition which goes through, compares, produces and deduces the internal relations in an understanding. One way to put this is that an idea, according to Spinoza, consists of cognitive activity whose internal structure generatively traces or reproduces the causal structure of its object. My intention was to point out that even though an idea is a cognitive activity in a mind, the nature of an idea *as an account*

[77] See 2d3.

consists in intrinsic relations of explanation. The relation to a subject does not enter into the nature of an idea as an account.

In sum, understanding is an act because it consists of internal cognitive resources that reside as features in the idea itself. Those internal resources are as it were a recipe for the nature of its object. The nature of an object in turn consists in how the thing operates, its causal structure.

This intrinsic view of understanding plays a central role in Spinoza's view of the mind. When there is an adequate understanding of a nature in the mind, that mind is in a position to make inferences about the future causal behavior of that nature. As we will see, that will prove to be a crucial

Next, we are going to look into what it for the human body to be a locus of intelligibility. That will pave the way for the explanation of what it is for the human mind to be an understanding of the causal structure of its body.

3.2.3 Why the Human Body Is Suitable for Causal Understanding

The mind can be a cognitive model of the body's nature because that the body's nature is a *locus* of intelligibility.[78] The human body is a dynamical system, that is, it consists of motive tendencies. Spinoza thinks that motion is a causal reality. By understanding the motive structure of the bodily system one can infer how that system acts. All the causal

[78] Spinoza does not trust the phenomenology as a source of cognition of natures. For him, what the senses show us can be rightly understood only through their cause, namely by interpreting the appearances in light of what one might call, to use Kant's term, "rational psychology".

powers of the body are ultimately grounded in its motive structure.

Causation according to Spinoza is intelligible through the structure of the physical system in question. Causation is internal to a thing, rather than being a relation between events. Spinoza's way of thinking about causation in bodies contrasts fruitfully with Hume's views. Hume thinks that causation is a relation between events and thinks that this relation cannot be understood by an intellectual operation. Spinoza on the contrary thinks that it can be understood. That is because causation is not a relation but rather an internal principle of change in things.

Here Spinoza's doctrine of substance has a concrete meaning. All bodies are modes of the same substance. The substance consists of the invariant causal principles of physical Extension (homogenous matter-space compound). All causation is internal change of mode which Extension is performing due to its internal, invariant principles. When one body acts on another, the structure of their motive patterns mutually constrain each other and force a change in both. In this way, Spinoza views essences of bodies—structures of matter in motion—as causes. The nature of bodies and their causal efficacy are inseparable. One cannot understand what a body is without couching that understanding in terms of the causal operations of that bodily system.

The causal efficacy of the nature of the body is central to Spinoza's thesis that the mind is an understanding of the nature of its body. If it were the case that the causal behavior of bodily systems was not intelligible from the nature of that body, then an understanding of the nature of the body would not give a foothold to the causal behavior of the body. Consider, for example, a contrast to Hume's view, according to which

cognition of causes is based on regularities of observations. Hume denies that there is an account of the how and why one causal structure affects another. What Spinoza calls the "how and why"—the physical causal connection— is in Hume's view consists of a rich class of regularities in Nature where the "cause" event is observed to follow the "effect" event.[79]

Natural bodies are, in Spinoza's view, *stable* dynamical systems. A natural body is not just any arbitrary collection of structural features. A nature is a stable structure which is sustained in existence by some causal mechanism.[80] For example, a tree is a natural thing and has a nature because its status as a stable physical structure is caused by its life-sustaining functions. In contrast, an odd grouping of socks and shoes on my living room floor is a relatively stable structure but only in the broadest sense. It exists as a "thing" only due to variable and circumstantial causes, e.g. behavior of the inhabitants in the apartment. There is no stable causal structure internal or external to that scattering of accessories which sustains its existence.

The nature of a thing is understood by cognizing the causal structures which sustain it as a stable existent. For example, the nature of a tree must be understood through the way its roots, trunk and leaves together form an entity capable of persisting and acting. Because the constitution of the tree consists of a nested hierarchy of sub-

[79] See Hume (1978), p. 166.

[80] See *the Ethics*, 2d4 and *TIE*, paragraph 85. Spinoza says that a thing must be understood through its cause. The cognition of a nature involves the cognition of its cause.

systems and patterns of causal activity, the understanding of its nature tracks or models that nested series of patterns with the formation of the whole as its guiding condition.[81]

Spinoza conceives natural bodies as organic in the sense that they consist of a hierarchy of stable systems. Sketching that view is the goal of the so-called Physical Digression in the *Ethics*.[82] Spinoza is trying to sketch out a theory of the nature of an organic body in which a body has what calls "the form of the body". That form is not an Aristotelian form which actualizes a potential in its matter. Rather, it is the invariant pattern of activity which remains the same when the system goes through different states and even when the parts of the system change. For example, the state of the human body, when asleep, differs greatly from the man who is running. Nevertheless, there is an underlying, invariant causal structure in which those states exist as modifications. Because the body is a system of motive tendencies, the system's structure must be flexible enough that it can both be the cause of those overt behaviors but also remain intact and stable when it goes through those states.[83]

The hierarchical, organic nature of a natural body is important for the cognitive modeling view. If the human body did not have an invariant causal structure that in some

[81] One can apply the notion of act of understanding to simpler examples, such as rocks or weather patterns. I use organic things as examples because they are the target of Spinoza's project. If the nature of an organic body cannot be understood, then the mind cannot have a thoroughly cognitive relation to its body, because the body would be an intellectual mystery to the cognitive activity of the mind.

[82] See 2p13s.

[83] Viljanen (2011), p.163, offers a different interpretation according to which the issue is the individuation of bodies, and consequently, of minds. That is only one thing that is going on. The main issue as I see it is to provide an account of the nature of bodies which goes beyond individuation.

sense is above the parts that make up the system, then there would be nothing for the mind to model or understand. There would be no unitary or coherent mind because there would be only the various motions of matter which do not come together to form a stable pattern of activity.

The hierarchical causal structure of an organic body implies also that the mind of that body does not model every detail that happens in that body. The mind is a model of the way the sub-systems of the body form the whole body, but not principally of the way all the minute parts of it operate. The mind is an understanding of the operation of its body, not a total collection of information about the body. This is because the totality of information about the parts of the body is not yet an understanding of a body *with a nature*. The understanding of a nature consists in that internal ideational structure of the cognition explicates how and why the parts of the body come together as a single causally operative thing. For instance, making an exhaustive *list* of all the operations of each minute particle in the human body does not itself explicate how those minute particles constitute, say, a human being that walks, eats and drinks.

3.2.4 Mind as a Cognitive Activity

Spinoza's view of the human mind is formed out of three components. First, ideas are acts

of understanding.[84] Second, he holds that the mind's only operative tendency is the intellect, that is, the formation of true ideas.[85] Third, the human mind is the idea of its body.[86]

Suppose we take these theses that their face value: they form an account of the mind such that the mind is a single—albeit internally complex—cognitive act.[87] In saying that ideas are acts of understanding, he maintains that all that cognitive activity is fundamentally intellectual. Therefore, the mind forms ideas because it understands something (at least partially). The causal relationships between any mental states are relationships of understanding. What that means is that the only causal tendency of the mind is the operation of forming true ideas, and to infer from a true idea other true ideas. Finally, this does not mean that mind always in the situation of forming true ideas. The mind only does so in as much its present cognitive resources allow it. Spinoza thinks that falsity in ideas is sourced in a limitation of the underlying resources and tools of understanding that the mind has at a given moment.[88]

Spinoza is saying that there are no *non-cognitive* causal principles in the mind.[89]

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[84] See 2p43s.

[85] See 5p4s.

[86] See 2p13.

[87] See 2p11.

[88] Gilead (1999) p.171, has a similar interpretation of Spinoza's view on the topic of the essence of the mind. Gilead writes: "What is the human essence as it is considered in the attribute of thought? Spinoza has a clear answer to this question: 'the Mind's essence, i.e. power (by EIIIp7), consists only in thought (by EIIp11)" (EVp9d); or, more clearly, "the essence of the Mind consists in knowledge (by EIIp11)"

[89] Della Rocca (2003), pp. 209–210, suggests that each idea has a force or power by which it competes with

Everything that happens in it is to be understood in terms of its intellectual structure. This means that sense perception, imagination, memory, feelings, and conative aspects of the mind are derivative of the activity of understanding that constitutes the mind. It also means that the mind is at a primitive level driven forwards by thinking and understanding.[90]

Spinoza thinks of the human mind as consisting of cognitive determinations.[91] The operative principle of understanding is to form true ideas, that is, to think from true idea to another. That is just what the mind does, its internal tendency. This is analogous how explanation of activity bottoms out in the physiological structure of the body. There is not a more fundamental level of explanation of what this body is doing other than its is being driven by its physiological structure.[92]

The claim that the mind *is* a cognitive activity goes further than merely saying that there is a single faculty, or power, in the mind. Even if one admits that there is only a single power in the mind, one could postulate a thinking subject who uses the faculty of understanding for its own purposes. Separating the thinking subject from the faculty of

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other ideas in the mind for supremacy. He maintains that ideas have a property of being inclinations or impulses to action, and that all ideas compete via that impulsive force. I see this is as a non-cognitive principle of thought even if one would think of that impulse as a mere property of cognitions, and not as a separate mental item. We will return to the topic of mental striving in Chapter 4.

[90] One might worry whether it is too reductive. I recommend holding back that worry until one has grasped the full capabilities of Spinoza's theory. Spinoza recognizes the same worry in 2p11s and gives the same advice.

[91] See TIE, paragraph 85.

[92] There is a more fundamental level if we separate the material substance from the particular physiological structure that modifies it. All explanation bottoms out at the level of substance, according to Spinoza.

understanding would entail that the understanding is not the causal structure of the mind, only an ability of the underlying thinking being. If Spinoza were to maintain that the mind consists merely in the faculty of understanding, then he would require a further account of what the operative principle of that mental homunculus who uses that faculty of understanding. On the contrary, Spinoza explicitly denies that there is a *faculty* of understanding in the mind.[93]

3.2.5 The Human Mind Is an Understanding of the Nature of the Body

In the previous section, we noted that Spinoza thinks that the mind is a cognitive activity. The view that the mind's only operation is understanding would not work without the addition that the mind is an idea of its body. The role of the idea of the body is to unite the operative tendency of understanding to a particular bodily nature. That union is essential in the sense the mind's nature, or essence, consists in a cognitive structure that is an adequate idea of its body's operation. The purely cognitive mind is a particularized cognitive structure, a given adequate idea of its body.[94]

The mind is an understanding in the sense that it is internally structured to be a causal account of its body's causal structure. The point of Spinoza's view is that the mind's intellectual operative tendency applies that causal account of the body's nature to form and understand ideas of bodily changes. It will also use that causal account to think

[93] See Ethics 2p48s.

[94] For an explanation of what adequate ideas are, please see the discussion in Sections 3.2.1 and 3.2.2.

forwards in the time to form ideas of future bodily actions. For these reasons, I think believe it is apt to say that the structure of the mind consists of a *cognitive model* of its body's nature.

The mind's cognitive structure satisfies the conditions of an adequate idea. There were two main conditions which an idea must satisfy in order to be an understanding:

First, the mind's cognitive structure explicates the causal structure of the body in the sense that is grasps the mechanism of how and why some bodily change happens.

The second characteristic of the mind as an understanding, is that it reproduces the causal context of ideas in the mind's internal structure. This means that the mind is a complex idea whose internal structure consists of ideas of parts of the body's constitution. The point is not that the mind perceives or observes the human constitution, but rather that the idea of the body is an understanding of how the constituents of the body form together one complex human body.

It is worth stressing that mind does not extract the understanding of the body from its body.

Rather, that understanding is the mind's essence, or in another words, its core cognitive structure. The other cognitive states depend on that that original understanding of the body's nature. That dependence relation can be thought as presupposition. I use the notion of presupposition to describe that the mind does not infer or generate its own structure. The term also tries to capture how the essential structure of the mind is the basis of other cognitive states. Because the mind's essential cognitive structure is a causal account of its body's nature, the mind cannot leave its body behind when its forms

mental states. The point is that the mind's cognitive structure partially determines the formation of all cognitive states. In that way, one can call the idea of the body as a fixed presupposition within the mind's operative tendency of forming ideas.

The view that the mind is internally determined by its cognitive structure does not mean that the mind is merely rattling off some predetermined sequence of thoughts that derive from its innate understanding of its body. The idea of the body is a presupposition for forming other ideas, but that does not mean that it contains in itself all the possible cognitions that the mind can have. First, an understanding of the operation of the human body, does not give an understanding of what happens to the human body. That depends on factors external to the body. The ideas of those bodily changes appear in the mind as cognitive changes which the mind does not derive from its original understanding of the body's nature.

Second, even if the mind *is* an understanding of the body, the mind's operative tendency is to form true ideas as much as its present cognitive resources allow. That means the mind is internally determined to form new ideas as intellectual extensions of its innate account of its body. These can be, for example, sensory perceptions and mental appetites. We will talk about those later in detail. The main point is that the idea of the body is at the same cognitive resource but also in many ways limited because it only explicates the invariant operation of this body, and nothing else.

The presupposed understanding of the body forms the first and most basic element in the mind's cognitive structure. It cannot be removed without at the same destroying the mind's resources for cognizing anything at all. When a mind's cognitive

structure is constituted by that presupposed understanding of the operation of a certain body, the mind is by nature united to its body.

Suppose that the mind is only a very poor understanding—inadequate—of the causal structure of its body, then the mind does not have enough cognitive resources to form the ideas of what happens to it and what ideas of what its physiology is capable of. That mind's cognitive structure would not be a causal account of the operation of *this* body, and arguably of no body at all. Inadequacy of the mind's cognitive structure is therefore tantamount to mind not being the idea of its body, which is the same as there being no mind–body union at all. The mind–body union consists in that a rich and sufficient understanding of the nature of a particular body constitutes the mind's essence.

Now we can see better why I called Spinoza's mind a *cognitive model of its body*. Let me explain in what the sense Spinoza's view of the mind explains the agreement between mental states and physiological states. We described that with the slogan that the mind lives the life of its body, but cognitively. Because the cognitive activity of the mind starts from a presupposed understanding of the operation of its body, the mind is determined to form true ideas of the states of its body. Examples of those mental states are ideas of what happens to the body (sense perceptions and feelings) and ideas of actions that follow from the human physiology (actions and appetites).

In the same way as the body's nature consists of motive tendencies which drive human actions on their physiological side, the mind's activity is driven forward by true ideas, that is, understanding.

Variation in mental states is a result of new information about the state of the

body entering in the mind. When the mind is given some new information about the state of the body, it is determined by its internal cognitive resources to work out what new understanding it can gain. But since the mind is an understanding of the nature of its body and not of any other particular nature, the mental activity works out only what happens locally in this body.

The nature of the body is therefore united to the mind insofar it forms the basis of the cognitive machinery of the mind. This particular human body exists in the mind as a subject matter in the sense that the mind's cognitive activity proceeds from the position that the nature of the body is already understood, taken as a given.[95]

We should add that since the nature of the body plays a constitutive role in its mind's cognitive structure, Spinoza thinks his theory is capable of accommodating a range of minds with varying degrees of complexity: human minds, animal minds, and plant minds.[96] The baseline difference between a human mind and the mind of, say,

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[95] See Aquila (1978), p.282, for a similar solution. He argues that the mind is united to its body due to the nature of the idea. He asserts that an idea is nothing but the very physical thing being thought of. Where we part ways with Aquila is that we believe that cognitive activity is different in kind, so it is not true that the idea is nothing but the very physical thing being thought of. In order to be an understanding an idea must have internal characteristics that enable it to be an understanding of its object. By internal characteristics, Spinoza does not mean that the idea is physical. Rather, the point is that an understanding is couched in terms of the particular physical features of its object. This contrasts to, say, symbols, universal concepts or other abstract representational tools.

[96] In 2p13s, Spinoza writes that his theory can explain what it is for all natural things to be animate to a degree. He doesn't want to speculate about the empirical details of what those minds might be like, instead being content in pointing out this theoretical advantage of his view. Of course, someone could argue that this is a disadvantage of his view, because it could attribute cognitive activity to too many things. The answer to that objection lies in reflecting what the mind of those bodies would be functioning under the assumption that the mind is a cognitive model. If the body is not suitably stable, coherent, and in a word, organic, then the mind of that body would also lack those features. Even though this makes Spinoza's view more intelligible, the universality of cognition in Nature makes it still an odd view to us.

amoeba is that the human mind is an understanding of a more complex physiological structure. Obviously, complexity is not the only measure of difference. Spinoza's point is, rather, that in his theory the differences between cognitive capabilities is explained by physiological differences. Because the bodies of amoebas are rather simple, their minds do not have body models which can be used interpret rich types of information from their environment. An amoeba might, for example, possess only the ability to sense changes of nutritional and digestive changes in its body, but not capable visually perceiving those sources of nutrition themselves. Similarly, simple animals have appetites as well, but they are not the same as human appetites. The difference is not in the basic cognitive mechanism or form of how an appetite differs from a perception. Rather, since their physiology is not as rich as the human physiology, simple animals are unable to entertain as rich array of objects of appetite.

To a modern reader, it might seem strange that Spinoza thinks that the mind is *an understanding*. This is if we conflate the degree of understanding we have of natural things with their true ideas. After all, Spinoza himself admitted that he personally does not know the precise nature of the human body[97], or how the brain works.[98] These are way beyond the scope of the science of the physiology. The point of Spinoza's philosophical account of the mind is not to provide comprehensive details about how exactly humans have the ability to perceive things through their senses or other

[97] See 2p13s.

[98] See 2p17cp.

properties about our cognitive structure. Instead, he is providing a general outline of what the human mind is and what it is to be united to the body.

Spinoza's account that the mind is an understanding must be understood from a special metaphysical and explanatory vantage point. He warns the reader against taking sensory appearances at their face value and using sensory ideas as building blocks of one's theory of the natures of things. This is especially true of the nature of the human mind. In effect, he is saying that one should not start to start to understand the human mind from a first-person point of view by taking subjective sensations and mental images as models of what cognition is. [99]

When Spinoza talks about true ideas, or acts of understanding, he means the ideas as they are in God's point of view. By God, Spinoza does not mean a personal God, or even a creative intellect. Rather, he thinks that God is the first principle which generates the existence and essences of other things. God is a being which both is the physical principle of change in Nature and also the principle of cognition which understands things as they

[99] Koistinen (2009), pp. 169–170, makes an interesting point concerning the point of view of the human mind. Spinoza's view is that the finite human mind is part of God's infinite intellect. (See 2p11c.) To put it differently, the human mind is God's understanding of the human body. Koistinen is concerned about where to locate subjects of thinking in Spinoza's philosophy. He argues that Spinoza's thesis that the human mind is part of God's infinite intellect is really thesis about the conscious subject. According to Koistinen, the self as a thinking subject just is a local manifestation of the original, infinite conscious subject. Koistinen explains that one cannot understand how an idea which God has can explain how that idea by itself constitutes the human mind as a conscious subject. An idea even if it is had by God has no subjectivity. There are two objections I see to Koistinen's view: I'm not sure that Spinoza is trying to conceive a theory of what conscious subjectivity is. Koistinen seems to acknowledge this. Second, I think that there is another conception of a point of view that is available to Spinoza, the intellectual one. I think it is an option worth thinking about. Especially since the notion of conscious subjectivity is quite obscure. Spinoza's hardline rationalism is a possible reason why he refused to construct his theory of the human mind around subjectivity.

truly are. This is a variation of the ancient notion of Logos. The mind is an understanding in the sense of how the nature of the human body is understood from the point of view of the Logos.[100]

That is why the mind can be an adequate idea of its body, even while that kind of understanding is beyond the capabilities of the human mind itself. The idea that constitutes the human mind is not necessarily accessible to the conscious reflection by the human mind itself.

3.3 Cognitive Action Within the Model of the Body

3.3.1 Affirmation of the Present Existence of the Body

So far, we have talked about how the causal understanding of the body's operation constitutes the mind's cognitive structure. The mind's thinking activity is intrinsically structured so that it expresses the causal structure of a particular body. Although that intrinsic structure explains gives the purely cognitive mind means to grasp the invariant causal structure of the body, it does not as such have any relation to the presence existence of the body.

[100] This also reflects Spinoza's and his contemporaries' belief that thought is something metaphysically fundamental. The view that humans are capable of thinking because God is a thinking being was prevalent at the time. Spinoza's philosophy is more naturalistic in the sense that God did not *create*, but rather *generated* human minds. His view is on the contrary that cognitive activity is universally present in all of Nature. That is reflected in his view that all things are animate to a degree. See 2p13s. Also, in 2p57s he writes: "after we know the origin of the mind, we cannot doubt that lower animals have feelings." Here he is alluding to his view that cognitive activity is universal in Nature. Any sufficiently complex and intelligible organism has a mind, i.e. a cognitive model of its physiology.

That is because simply by understanding how the human body operates the mind does not necessarily conclude the human body exists. If the intellect could infer that the human body exists simply because the essence of the body is understood, it would have to be an eternal truth about that it exists. We can go back to the example of the master mechanic and her mental model of some complicated machine. No matter how intrinsically detailed and unified her understanding of the machine is, there is nothing in her idea of that machine that lets her veridically infer that the machine must exist. It could be that the machine with the exact structure her mental model is suited for does not in fact yet exist. This follows from the ancient notion that essence and existence are different things: Essence is what it takes for a thing to exist, not the very state of existence itself.

Spinoza thinks that the mind's cognitive relationship to the nature of the human body is an intellectual affirmation of its existence. Spinoza also thinks that all acts of understanding are basically affirmative.[101] This suggests to us that there is an intrinsic connection between the mind as an act of understanding and the cognition of the present existence of the body.

He talks about the affirmation existence in three notable places. He says that "the first thing that constitutes the nature of the human mind is an idea of a being existing in

[101] See the Ethics, 2p48s and 2p49s. Spinoza is not explicit about this, but he does not seem to maintain that there would be some other operation, such as predication that would be something external to affirmation and denial.

act"[102], "the basic conatus of the mind is to affirm the existence of the body"[103], and "the essence of the mind consists in this that it affirms the existence of the body in act".[104] Let me explain what he means by that.

The relationship of the understanding to its body is that the nature of the body is the subject matter of understanding. The way that the nature of the body exists in the mind is that the nature of the body is the starting point for the activity of understanding. By "starting point", I mean that the causal structure of the body is a subject matter which the intellectual operations of the cognitive model use as a principle in order to generate other cognitions.

Another way of explaining this that the mind is a ur-cognition with the human body as its object. The cognitions which the mind forms are modes or states of that ur-cognition of the body's nature. In other words, all ideas that the mind forms are states of its invariant cognitive structure. For example, when I decide to lift my hand, the mental aspect of this decision is a cognition of a particular physiological operation to which the body is determined. The cognition of that particular physiological state, however, happens as a change in the mind's original understanding of the body. The invariant, ur-cognition of how the body works—the mind's cognitive structure—enables the mind to form cognitions of the states of the body.

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[102] See *the Ethics*, 2p11p.

[103] See *the Ethics*, 3p10p.

[104] See *the Ethics*, Part 3, Gen. Def. of Aff.

The function of the ur-cognition of the body is to act as a basis for forming other cognitions. The ur-cognition of the nature of the body acts as a cognitive resource through which all the disparate information about the changes in the body belong to a unified cognitive system. In other words, the ur-cognition of the nature of the body gives the mind something to start from, a background of given understanding against which all the disparate changes in the body can be interpreted and understood.

Because the activity of thinking that relies on the understanding of the body's nature presupposes the existence of the body, the relationship between the affirming the body's existence and the understanding of the body's nature is intrinsic. What I have in mind is that the mind does not add a predicate of existence to a concept of a body via a separate attributive judgment. The affirmation of existence is not, then, a mental consent for the proposition "the human body exists".

If the existence of the body had to be added to the body through an attributive judgment, then it would mean that it is existence of the body is extraneous to the mind as a true idea of its body. That would create two possibilities for where the cognition of the existence of the body comes from.

The first option would be that the mind itself brings it about the body exists, by willing or desiring that its body exists. The mind could, for instance, judge that the human body must exist. But that judgment cannot arise from the understanding of the body's nature, since the human body does not exist necessarily. That would mean that the mind has just arbitrarily decided that its body exists. This cannot be what Spinoza is thinking because he thinks that the mind cannot arbitrarily decide to affirm things which

it does not understand at all.[105]

The second possibility is that the mind has learned from somewhere that its body exists. It true that the mind can notice that its body exists through the senses. For instance, when I unknowingly sit on a sharp tack that has been left on a chair, the sensation of sharp pain makes me recognize that my body exists.

Such bodily sensations are not how the mind originally affirms that its body exist. Spinoza clearly indicates that the mind's affirmation of an existing bodily nature is the *first thing* that constitutes the mind's nature. If the mind would have to always learn that its body exists, then one could hardly say that the affirmation of existence of the body is part of the basic cognitive structure of the mind, but an additional extraneous judgment.

What Spinoza is trying to do is to account for the basic *givenness* of the body in cognition. I don't take the above alternatives to be credible accounts of how the body is taken as a given in cognition. If the mind has to learn through the senses or explicitly consent to the existence of its body via an attributive judgment, that would contradict Spinoza's view the cognitive activity is by nature united to its body.[106] The simple way to put his view is that all the mental activity presupposes the existence of the body as a subject matter that is understood.

The notion that an understanding presupposes its subject matter is not a new one. *Scientia* is rational investigation which takes some subject as its object and depends on

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[105] See 2p49s.

[106] See 2p13s.

the existence of that subject matter. One cannot have a study of something without at the same presupposing the existence of that subject matter. For instance, it is not possible to detach the study of Euclidian geometry from its subject matter which consists of the nature of spatial structures such as lines, points, and angles. The geometer can, of course, make discoveries where some particular geometrical construction is shown to be impossible and non-existent, but that discovery is drawn from the nature of the subject matter itself. The fact that the geometer can successfully understand something about a geometrical structure seems to exclude the possibility that the subject matter does not exist at all. If there were no subject matter to which the rational investigation was directed, then the investigation would not take off the ground at all.

The disanalogy between Scientia as an object of investigation and Spinoza's mind as an understanding is that Scientia is not yet understood by its investigator. In contrast, Spinoza's mind is not studying or learning about its body. Rather, the mind's cognitive structure consists of an adequate causal account of its body. What the mind learns or comes to understand are relations of the object of that original account to other objects of cognitions, e.g. other bodies affecting the human body. In order to even exist as a unitary mind, the mind must have a coherent cognitive structure. In other words, there is no mind for a body whose nature is incoherent and contradictory. That makes it safer for Spinoza to say that the mind's understanding of the body's nature presupposes the existence of that body. The mind could not be united to a particular body if its cognitive structure would not express the nature of its body.

The cognitive model that is the mind presupposes the nature of the body as the

basis of its mental actions. Those mental actions are inferences or thinking which the mind as cognitive activity performs based on the affirmation of existence of the body. Because that presupposition of the existence of this body (with a rich causal structure as its nature) conditions all the inferences the mind performs, mental activity models the activity of its body. This is the topic of the next section. We explain further why the slogan "the mind lives the life of its body but cognitively" is apt for describing Spinoza's view.

3.3.2 Mental Acts are Causal Inference

Spinoza's view is that mental actions are cognitions which the mind forms from its available cognitive resources. More specifically, they are causal inferences in which the mind infers from its present cognitive state to the following future one.

A warning about the term "inference" is in order, because it brings into mind the traditional views concerning the mental language and Aristotelian term logic, where inferences are syllogisms, which take propositions as premises and as outputs they return another proposition as a conclusion. Spinoza's view of understanding is not best expressed as an act of logical inference because he does not seem to think that there are abstract, general logical rules from which the mind understands what the body is and how it operates.[107] Instead, the mind is a more like a singular thought whose structure

[107] See TIE paragraph 85.

consists of further understandings of particular physiological structures. Universal logical rules as such do not help the mind in being a cognitive model of that kind of structure, because as he says general principles do not describe the nature of any particular body.

Further, understanding is not an analytical, according to Spinoza. When the mind uses its innate understanding of the bodily causal structure to cognize some change in the body, that new cognition is a synthetic understanding. It adds something genuinely new to the mind's understanding of the world. In this sense, as I have mentioned before, the mind's idea of the body is a starting point for the formation of perceptions and inferences. It seems to me that if the mind's understanding of its body would be analytical, then it would have to be an understanding not just the causal structure of this body, but all the actual relations of the human body to other bodies.

I chose the term "causal inference" as the operation by which the mind models the operation of its body in time, because the activity of forming ideas is the intellectual operation of concluding, inferring or deducing. This activity of forming ideas from another idea corresponds to how effects *follow* as properties from an essence.[108] So, what I call "causal inference" is just the activity of idea formation.

Why I think "causal inference" is a fitting term is that inference is *truth preserving*. The mind is a cognitive model of its body because it forms ideas of what its body does

[108] As evidence for this claim, see 1p16 which is a central proposition for the whole cognitive modeling view. It establishes an agreement or unity between idea formation in God's intellect and essence-property causation in bodies. This proposition is used to establish both propositions 1p25 and 2p3 which are again central to the cognitive modeling thesis. We return to the role of the infinite intellect for the cognitive modeling thesis in a footnote at the end of Section 3.5.

based on the mind itself being a true of idea of its body, and that the modes of the mind are true ideas of the state of the body. In this way, the term "causal inference" is better than, say, *causal thinking* because thinking in some broader sense could be just arbitrary formation of thoughts without regard to truth, e.g. combining materials from the memory to create sensory states which do not veridically correspond to the state of the body, or simply forming a thought in order to entertain it without regard to its truth.

In Spinoza's cognitive view of the mind, mental actions are merely manifestations of the mind's cognitive task of understanding. The mind's nature is to grasp, as far as it can the truth that is available to it. Because the mind's structure is intrinsically a cognition of its body's operation, the mind by nature performs causal inference from its internal cognitive resources. These cognitive resources are simply true ideas, that is, acts of understanding, as I explained earlier. The mind's nature as an idea is the foundational cognitive resource for this inferential activity.

Because the mind's nature is to affirm the present existence of the body, its cognitive resources express whatever the present state of the body. The consequences that the mind draws from those resources are future cognitions of the body.

Spinoza has provided an account of the mind's agency where the mind has three things: 1) a genuine causal power 2) which depends on its internal cognitive resources and 3) does not presuppose any other mental power or faculty aside from the cognitive one.

In Section 3.2, we explained that the essence of the mind is to be an understanding of the causal structure of the body. The essence of the mind is an invariant cognitive structure. That cognitive structure is affirmative in the sense that it presupposes the

present existence of the bodily causal structure. The mind's cognitive processes presuppose, or start, in an invariant thought that the body exists now.

The mind's task is to cognize what is true given its present cognitive resources. This means that the mind must by its nature infer what follows given the presupposition of its body's existence. The mind by nature is driven forwards by this determination of preserving the truth of its cognition. Whereas the body is driven forward by life forces and vital motions, the mind is driven forward its determination to cognize what truly follows from what it presently understands.

The mind's essential cognitive structure is an invariant cognitive resource for inferences. The body exists as a subject matter for the activity of understanding that is the mind. The nature of the body is the invariant causal structure that exists when the body itself exists. Because the mind is an act of understanding with the body as its object, the nature of its subject matter is expressed the mind's cognitive structure. The invariance of the nature of the body is expressed that there is a corresponding invariant cognition which is the mind's essence.

What I mean by that is that the stable and invariant operations of the body constitute the mind's structure as cognitions. So, for example, the fact that the body is constituted by a great complexity of life functions centered around the nervous system, is expressed in the mind's cognitive structure.

On this basis, Spinoza can say that mental aspects of appetites and desires, for instance, are just cognitive activity. The life functions which constitute the nature of the body are motive tendencies, life motions. Since the mind's cognitive structure has the

nature of the body as its subject matter, the mental aspect of an appetite is causal thinking or inference that draws on that subject matter.

The activity of the mind consists only what it can truly infer or think to follow from its understanding of the nature of its body. One might ask why the mind is so limited in the scope of its activities. The answer to that question is the mind's essence. The doctrine that the mind is an idea really means that there is an informational starting point for mental activity. While all the states of the mind change and vary, the mind itself continues to presuppose the existence of its object, the body. This means at every point of time the mental acts are thoughts which presuppose the existence of the body.

Now, the innate cognitive resources of the mind reach only as far as the invariant nature of the body. The body, however, is a dynamic pattern of motions. Because the state of the body is changing in time, the mind's states also must change if it is it to form true ideas of bodily changes. The understanding of the causal structure of the body is invariant but atemporal. Whereas the body changes in time, the states of the mind also change in time.

The above interpretation helps to explain some of the more difficult parts of the text. Spinoza connects mental decisions to cognitions of what *follows* necessarily from the nature of the human body.[109] He also says that a mental decision and the physiological determination to act are at one. These claims are explained by the cognitive modeling view.

[109] 3p9s.

What Spinoza offers is a view of mental action that in fact has no separate power or reality of mental trying, desire or willing. There is no mental force that moves the mind from a thought to another thought, and equally the mind does not move its body to action with a special power of willing.

The mind is related to bodily agency in virtue of its management of its cognitive resources, or cognitive power. In this way, we can make sense why Spinoza can say that the mere thought of moving a hand is united to the movement of a hand on the physiological level. If there were no idea of the body that is inbuilt into the unconscious structure of the mind, there would be no cognitive ground from which the mind could without observing form the cognitive decision of motion of the hand.

In Descartes' view of the mind, a thinking being would be free to merely conceive that the hand is moving without truly committing to that decision. That freedom of conception is built onto the Cartesian notion that the mind has a free practical agency which operates separately from the bodily operations. In Spinoza's case, the mind as a cognitive model is under the yoke of an internal necessity which arises from its cognition of the body's operation. That unconscious understanding of the body's operation determines the mind internally to produce a thought that the hand is moved. This is not a sensory observation that the body is moving its limb, but rather a productive act of the mind which is an expression of the mind's task as a thing which understands. The point is that if the idea of the body is veridical[110], then the mind's thought of moving a hand is an

[110] One could object: Why does the idea of the body have to be veridical? The answer to this challenge is

act which the mind performs from its own nature, but which also agrees with what the body does.

3.4 Perceptions as Modes of Body Cognition

Earlier we talked about the modes of thought that the mind forms. Those ideas are cognitive acts which the intellect infers from its present cognitive resources. What remains are those modes of thought in which the mind is receptive in respect to the cognition. Since I have proposed that the mind is an act of understanding, it is a special question how it is that the mind receives information about things which it does not understand from its innate cognitive resources. In other words, we want to know what perceptions are according to Spinoza. He says that the mind (which is an idea) perceives everything that happens in that idea. That is a peculiar thing to say about perception.

A perhaps more traditional view of perception is that the mind is conceived as an agent which abstracts, classifies and recognizes patterns in sensory information which the mind receives. That traditional view of the mind (i.e. the intellect) claims that the mind is directly receptive of sensory information. That kind of mind is akin to a container in

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that Spinoza's discussion is not epistemological. His task is to be provide an account of the mind and its union to the body which is thoroughly cognitive and avoids the postulation of a special practical cognitive power of the mind. So, his objective is not to *prove* epistemologically that the mind's cognitive structure must match that of the body. Suppose that Spinoza is right that the mind-body union is cognitive. If my mind's cognitive structure is not a veridical cognition of the body's operation, then it would mean not that the mind is somehow wrong about its body, but simply that the mind is not the mind *of* this body at all. The mind is not a mind in virtue of an epistemic attempt of understanding the body but rather through the metaphysical matter of fact that holds between the cognitive structure and the bodily structure.

which the sensory material is present to the awareness of the mind.

In contrast, Spinoza thinks that the mind is itself a cognition, not a container in which ideas are present. Because the mind is itself a cognition, the mind perceives other things only indirectly, or mediately, insofar as the immediate object of the mind is modified with further ideas.[111] My aim is to explain the grounds and function of this peculiar view.

Perceptions are ideas which the mind has. They are modifications, or cognitive updates of the idea that the mind constitutively is. This kind of distinction has been suggested by Gueroult in his detailed commentary of Spinoza's Ethics.[112] What remains unclear from the distinction is that what is the causal relationship that holds between the idea that constitutes the mind and the ideas that the mind has. My answer to that question builds on the interpretation that the mind is a cognitive model of the operation of the body.

The cognitive model interpretation entails two things about the causal role of perceptions, or ideas that the mind has.

First, the cognitive acts of the mind require perceptions for cognizing what its body does. This is because the state of the body cannot be cognized by understanding

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[111] Feuerbach in Section 93 of his *Geschichte der neuern Philosophie* suggests that the body is an immediate and direct object of the mind. This is right. He does not explicitly say how exactly the perceptions of other bodies are mediate and indirect cognitions, e.g. whether the mind comes to possess more objects than its original ur-object, or whether those perceptions are modifications of the same ur-object. I lean on the latter option, at least regarding to perceptions of other bodies.

[112] See Gueroult (1974), p. 239, for a useful discussion on the subject of distinguishing the idea that constitutes the essence of the mind and the sub-ideas that the mind has.

only the invariant causal structure of the body. In fact, only very little about what the body does can be cognized from the mind's essence alone. In ordinary human life, we are almost entirely reliant on the guidance of the sensory information.

Second, the mind's capacity to perceive depends on the idea of the body. The ability for the mind to perceive and receive information about other bodies and feel changes in its body depend on the original, ur-cognition of the nature of this body. The mind can receive and interpret sensory ideas only because the mind's nature is constituted by an understanding of the operation of the body.

The essence of the mind consists in a cognitive model of the causal structure of the body. This innate understanding of how the body operates only grasps the invariant features of the body. From its invariant cognitive resources, the mind cannot generate ideas of the present or future state of the body, in as much those states depend on the body's interaction with other bodies. For this purpose, there must be modes of mind which update the mind about the present state of the body. These Spinoza calls perceptions.

The function of perceptions is simply to provide more cognitive resources for the mind for its act of understanding. When the mind is modified with true ideas of the state of its body and how the body is affected by other bodies in its environment, the mind can form ideas of the future state of its body. Because those perceptions are true ideas of what is happening to the body, the mind understands what happens next. From its present idea of the body it infers the future state of the idea of the body, and insofar as the perceptions are true, those inferences are truth-preserving.

Those cognitive acts which are mental aspects of decisions rely almost entirely on perceptions and imaginative capacities. The mind cannot rely on its essence to generate ideas of future bodily states, because the mind's essence is an idea which affirms only the invariant operation of the body. Because the body exists in a dynamic flux as a mode of an infinite Extension, there is very little it can infer from its essential cognitive resources alone. Therefore, in order to form the idea of, say, lifting an arm to reach for a bottle of water, the cognitive model of the body must be updated with a rich array of ideas of what the state of the body is. In other words, the mind must have an idea of deficiency of water in the body, an idea of the state of the body model that reflects the presence of a nearby bottle of water and so on.

The causal function of perceptions is now clearer. The mind as a cognitive model of its body relies on its changeable states because it is an understanding of the body existing in the present.

Let's move onto the second issue about perception, which concerns a priority between the understanding of the body and perceptions that the mind has.

Note that the fact that the cognitive modeling of the body's operation needs changeable states does not entail that the mind's essence itself consists of perceptions. If it were so, the mind as a cognitive model would be constituted by changeable states, i.e. cognitions of the state of its body. This would invert the thesis that the mind is an understanding of its body into a thesis that the mind is a series of perceptions of its body. I won't argue against that view now, leaving it for later to Sections 3.5.1 and 3.5.2.

On the contrary, Spinoza's view is that the understanding of the body is

constitutively prior to perceptions. This is simply explained as a priority between the invariant cognitive structure of the mind and the modes, or changeable states, of that structure.

We can approach this by the tools we gained in Section 3.3 concerning intellectual affirmation of the existing human body. The nature of this body is the ur-object of cognitive activity. What Spinoza calls *perceptions* are therefore really modes of that original ur-cognition that constitutes the mind. This is, I think, the most straightforward interpretation of the thesis that the mind *is* the idea of its body. It means exactly that the mind is a single (but very complex) cognition which has one immediate object, the operation of the human body in real time. Perception is not a matter of the mind acquiring new objects, but rather that mind's ur-cognition, its body model, is modified in a new way to reflect the situation in which the body is operating.

This view of perception and sensation arises from Spinoza's attempt to construct to a view of the mind, which is purely intellectual, or in other words, consists of only understanding. What that means is that the perceptions are really atrophied[113] modes of intellectual activity.

Let's see how that view would work via a more concrete example. The mind's formation of perception relies on an understanding of what its body is doing. The brain is a sub-system involved in constituting the body's causal structure. The mind as an

[113] I'm indebted here to Carriero's (2016), p. 141, apt characterization of the relationship between the intellect and imagination in Spinoza. Carriero writes that imagination and sense perception are atrophied forms of understanding.

understanding of the causal structure of the body is a cognition of how the brain operates. The brain has a structure by which it can form images of other bodies. The mind's cognitive activity is structured to a model of the causal activity that is happening in the brain. When the brain forms an image, the mind can form an idea of that physical pattern in the brain because the mind presupposes an understanding of how the brain operates.

Another way to explain the above is that the mind as a purely cognitive activity must presuppose or start with a cognition of the nature of the body *to interpret* incoming information about changes in the state of the body. By being an understanding of its body's operation, the mind can receive meaningful information about what is happening to the body and how other bodies in the physical environment are acting on the body. So, the idea of the body is the cognitive presupposition that is *required* for the mind to form any ideas of changes which take place in the body. This is another way to explain why the idea of the body forms the *essence* of the mind: all other cognitions of anything relating to the human body depend on prior cognitive resources which explicate the operation of the body. Those cognitive resources must be such that the structure of the mind is a cognitive expression of the body which has a brain, sensory organs and a nervous system which are required for the kind of cognition that this particular human being has.

Spinoza's view stands here too in contrast to the Cartesian view of the mind–body union. In the Cartesian view, the mind's sensory faculty cannot itself interpret what, say, a sensation of pain tells of the state of the body. This is because the nature of the thinking being, i.e. the intellect, does not involve the nature of the human body. Therefore, the

mind does not have prior intellectual resources against which to interpret the sensations by which the mind is affected. The mind does not innately understand how the body operates, so the mind does not sense that the body is operating poorly by first being a model of the operations of the body as an organism. Instead, an indispensable role is placed on the third factor of the mind–body union which coordinates the sensory state of pain to agree with the appropriate movement of animal spirits in the brain. The mind–body union sets up the correspondence between the sensation that the body is not doing well (the information about the state of the body) and the sub-optimal functioning of the bodily automaton.

The main texts supporting this interpretation are as follows. When Spinoza sets up and introduces his view that the mind is the idea of the human body, he says that "the first thing that constitutes the active nature of a human mind is nothing but the idea of a singular thing existing in act".[114] Let me unpack this. Since Spinoza holds that essences are causally efficacious, the term "active nature" refers to the mind as a cognitive structure that acts in real time, in the present. [115] The mind's nature acts in time by forming further ideas because the causal power of understanding is to produce true cognitions.[116] The part

[114] See *Ethics*, 2p11.

[115] The Latin phrase is *actuale esse*. This is sometimes translated as "actual being", but that is a misleading usage because the traditional philosophical meaning of "actual" contrasts to the meaning of "potential". Spinoza rejects the Aristotelian actual/potential distinction as a deep metaphysical explanatory account. Later in Part 5 (5p21 and 23) Spinoza explicitly uses *actuale* when refers to the activity of the mind and body in duration, as opposed to what their status is vis-à-vis eternal natures of things. In this way, the meaning of actual is more properly taken to be active as opposed to inactive.

[116] See 5p4s.

about the "singular thing existing in act" means that the thing that is modeled by the mind is a singular nature which acts in the present. Spinoza, thereby, rules out that the mind is a general concept of its body or alternatively a cognition of Platonic Form of the body existing outside the flow of time. In sum, Spinoza is saying that the basic constituent of the mind's cognitive activity is the cognition of the body acting in time. The part about "existing" is to stress that the mind directly cognizes the very physiological structure that exists here and now, and not a universal concept or a separate Platonic Form of the human body.

What remains under question is to how to interpret the piece about "the first thing that constitutes". More help can be gained by looking into a nearby text where Spinoza says the idea of the body is "prior in nature". He explains this by saying that "when the idea of the body is given, then those other modes [of thinking] exist in the human being".[117] This is best interpreted so that the relationship of the idea of the body to modes of thinking is the relationship of an essence to the properties that follow and depend on that essence. So, the priority between the cognitive model which constitutes the mind and the modes of that model is causal. In other words, perceptions are formed by the mind's cognitive structure which is intellectual in nature. The causal relationship is not temporal in the sense that the idea of the body would exist as an event separated in time from the modes of thinking. Instead, the modes of thinking are states or modifications of an

[117] The relevant part of 2p11d reads in Latin: Essentia hominis [--] constituitur [--] a modis cogitandi quorum omnium idea natura prior es test et ea data reliqui modi (quibus scilicet idea natura prior est) in eodem debent esse individuo. Atque adeo idea primum est quod humanae mentis esse constituit.

underlying cognitive structure whose task is invariant, and those states exist on the causal foundation of the mental machinery.

3.4.1 Feeling Changes in One's Body

Spinoza's view explains why the mind feels things happening in this body and not other bodies. A feeling of pain in Antti's mind is a modification of the body model which constitutes the nature of A's mind. Because A's mind is constitutively related to A's body, the feeling of pain is necessarily always felt in A's body.

Antti's mind is not capable of feeling changes in other bodies, because Antti's mind is not an understanding of the operation of, say, Paul's body. Antti's mind is separated from Paul's mind because A's mind is a cognitive model of the nature of a particular body, A's body.[118]

It can be surprising to think of feelings as a species of cognition, because they have an essential dimension of things going better or worse for the person who undergoes those feelings. That is an issue we will deal with in the next chapter, because the notion of things going better or worse for me requires the conception of me as a living thing. At the present, I'm explaining feelings as at their minimal condition of being passive states, namely as states where I feel something happening to in an immediate manner to myself.

[118] See 2p17s.

In Section 1.5.3, we saw that in Descartes' theory that the mind feels things in its body, e.g. pain, pleasure, hunger and thirst. These feelings are distinguished from other sensations or perceptions (such as vision) due to the special way in which those feelings present this body. Pain presents this body as my body, because I feel pain in it. From the point of view of Descartes' mind, its body is just one object of sense that exists among all other bodies. Descartes divides the senses in two primitive categories: the internal and the external. The internal senses are cognitions of *my* body, whereas the external senses are cognitions of *any* body. What distinguishes my body from other bodies in Descartes' view is that this particular body affects my mind in a special way.

Descartes' view of the experience of having a body is problematic, because one would like to say that there is some more fundamental way that one's body is given in one's mind. Spinoza's view offers an alternative in that regard to Descartes' view.

Spinoza's view differs from Descartes because there is a more primitive cognition of the body in the mind, namely the ur-cognition of the nature of the body. All other cognitions are by default modifications of the body model. A feeling is the simplest kind of cognitive change, because it is not attributed to a *perceived object*. My body is given to my mind in the sense that the cognitive model of the body's nature presupposes the existence of the body.

We can find supporting evidence for Spinoza's view in our phenomenology: For example, a change in mood, such as suffering or malaise, is not arguably located anywhere in my body and does not present this body as an object of sense. This contrasts to how a sensation of pain in a limb indicates to me that my body in this location of space

is being damaged.

The mind as a cognitive model of its body's causal structure has an intrinsic and immediate relation to its body. Therefore, the feelings that a person feels in the body are not attributed to a special object of sense— "my body"—but rather they are states of the cognitive model. It turns out that the simplest modification of the body model is the most intimate way I can relate to things. Because I—the mind— *am* the cognitive model of the body, any modification of the cognitive model is the same as *me* being affected or feeling something.

The idea of the body gives the intellect a particular starting point or perspective in the world of bodies. Spinoza's mind has as its an intellectual point of view because the mind's nature is to affirm the existence of its ur-object, onto which sensations are built as modes. The ur-cognition of the body plays the role of what in other theories would be called first-personal or perspectival properties of sensation and feeling. This is because the intellect affirms the existence of a particular body, not a general concept of a body.

If there were no particular object to the intellect, then the mind would have to learn about the existence of the body through the senses. In that kind of Cartesian scenario, the mind would have faced the issue of determining which of the bodies presented through the senses is *my* body. This presents an issue of indexicality, or ownership, where one body is specially marked as *my* body in addition to the information we sense about the state of the body.

Spinoza's theory avoids the requirement that feelings or sensations themselves must provide this additional indexical information about body ownership. Rather,

feelings inherit this indexicality from the particularity of the ur-cognition that is the body model itself. In Spinoza's theory, there is no special problem of a mysterious "first person" perspective in one's sensations or feelings. His theory is, in this regard also, thoroughly rationalist.

3.4.2 Perceiving Other Bodies as Present

In the previous section, we explained how the body model view of the mind can explain what is that we feel pain, pleasure, hunger and thirst on account of our minds being cognitive models of this body not of others. Let us return to the example of sense perception which we used earlier in Section 3.1.3. Now we can understand that example in light of the more detailed theory.

Spinoza's theory of the mind as an idea requires that the mind is a true idea of the nature of its body. Why? Because if the mind is not a veridical cognitive model of the nature of its body, the mind fails to be the mind of this body. This comes back to the realization of the slogan: "The mind lives the life of its body cognitively". The mind won't be able to produce as ideas what its body does and how the body reacts to actions of other bodies, if it does not consist in adequate cognition of its body's causal structure. Mental states (active and passive) would fail to agree with bodily states.

For the same reason, that the mind lives the life of its body cognitively that the cognitive model of the body is a veridical cognition of the body's state and how the body is affected by other bodies. The body model infers ideas of its future cognitive state from

the present state of its body model. These changeable states are perceptions, e.g. imaginations and feelings. If perceptions are not veridical cognitions of how the body's operation is disposed, then the mind does not have the right cognitive resources to make true inferences about its future states. Again, that would break down the mind's union with the body, which consists in the mind being an adequate idea—an understanding—of its body.

The above veridicality requirement of the cognitive model creates an apparent tension with the everyday observation that my perception of other bodies is sometimes non-veridical. Examples include hallucinations, illusions and dreaming. Let me explain how Spinoza's view can explain the non-veridicality perceptions without conflicting with the veridicality of the body model.

In order to answer the above question, we must explain what it is for the mind to be perceive other bodies as existing in the first place.

First, all perceptions are updates in the ur-cognition of the body, that is, present states of the body model.

Other bodies are perceived as existing by default. Image perceptions as if inherit the existence of their object from the body model itself. As I explained earlier in Section 3.3.1, the ur-cognition of the human body consists in an affirmation of existence where the body model presupposes the present existence of its body as its subject matter. These technical features of Spinoza's view are crucial here in explaining why the mind perceives things as existing by default. Any update in the body model is a change in the nature of the body which the mind's cognitive model presupposes to exist.

Spinoza gives an interesting answer here as to why we automatically attribute existence to things presented to us through sensory perception. His answer is that we in fact do not *attribute* existence to them. Instead, when I perceive another body as existing, I do so by default because that perception is a modification of our body which the mind's activity presupposes as existing. [119]

Image perception is different from simple feeling in that image perception presents a body as existing whereas feelings, such as suffering and hunger, can exist without a perceived object, as we explained in the previous section. Image perceptions are, therefore, ideas with a different cognitive structure than those ideas which are feelings.

The difference in the cognitive structure of image perceptions and feelings must be a difference in the operations of the body, which are correspondingly expressed in the body model. As we will see in Chapter 4, Spinoza's theory allows that the body models of simpler organisms, such as amoebas, do not present other bodies as existing because their bodies lack sensory organs, but they do have changes in their cognitions of the life-functions, i.e. feelings of pleasure and suffering.

In contrast to the minds of simpler organism, the human mind is capable of perceiving other bodies as existing. This must be due to the nature of the human body. The human body is equipped with sensory organs and a nervous system enables the body to have the nature of those other bodies present to it. Due to the constitutive role of the

[119] See 2p17p and 2p17s. Also relevant is 2p11p. "When the idea of the body is given, then those other modes exist in the human being."

body in the mind, the human mind can perceive as existing because it is an understanding of the human physiology, a body with sensory organs and a brain capable of forming patterns which are sensitive to the presence of external bodies.

Because the body model constitutes the nature of the mind, perception of other bodies is an indirect or derivative mode of intellectual understanding. Therefore, Spinoza does not postulate a separate power of sensory perception in the mind. The mind itself is a cognitive structure which expresses cognitively the operation of the body, and that cognitive structure interprets new information about the state of the body. So, when the light enters the visual organs and consequently via the nerves produces patterns of activity in the brain, the body model is simultaneously modified with an idea of that pattern of activity.

The above is not yet the perception of the external body. The intellect needs to do its work, namely to *read off* or extract the perception of the external body from the idea of bodily change.[120] The mind as a model of the body's operation forms the idea of the external body because it is a cognition of the operation of the visual system and the brain. The external body is perceived as present when the idea of that brain pattern is understood together with the innate intellectual resources of the body model. These intellectual resources consist in the understanding of the causal structure of the body, against which idea of the brain pattern is interpreted.

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[120] See 2p17p, "for as long as the human body is thus affected, so long will the human mind regard this affection of the body; that is, it will have the idea of a mode existing in actuality, an idea involving the nature of an external body[--]"

The mind does not have a truly separate idea of the external body. Strictly speaking, there is no idea of Peter *full stop* in Antti's mind when A perceives the body of P as existing. It is more appropriate to say that Antti has an idea of Peter-as-he-affects-the-operation-of-the-Antti's-body. This formulation takes seriously the active role that the intellectual body model plays in the formation of perceptions. To put the point in different jargon, the mind consists in an intellectual act which affirms the body as its ur-object. All perceptions of other bodies are really modifications of that ur-cognition. The mind discerns or perceives other bodies through their effects on the operation of the body.

That solves the veridicality problem of perception. The body model itself is not necessarily an accurate guide to how external bodies are in themselves. The body model is only an accurate or veridical cognition of how those other bodies (even those which no longer exist) affected this body. Spinoza nevertheless does not think that sensory perception is a power of the mind directly. Instead, he views it as a principally physiological capacity. Our minds only have derivatively the ability to perceive because the body model exploits its understanding of physiological capacities of the body. In that sense, sensory perception never produces true understanding of the natures of other things. Of course, that does not remove the fact that it is very useful for us that the human body has the physiological tendency to navigate by the sensory signatures or traces left by other bodies.

Finally, this interpretation of Spinoza makes sense of why Spinoza thinks he can explain sense perception through what initially seem to be too general and abstract

considerations. He draws on a general principle that externally caused bodily changes follow from the nature of the body together with the nature of the other body.[121] That principle could apply equally to both how fire changes a pile of wood and how the retinal image of a wolf changes the brain activity of a sheep. Because the principle is so general, it seems strange that it could explain anything about what it is for the human mind to perceive other bodies.

This difficulty is removed if we interpret Spinoza so that the mind is the idea of the nature of a particular body. If the idea of the body that constitutes the mind would be only a general concept of the body, Spinoza's view would not get off the ground. Any arbitrary body is constantly affected in various ways by all manner of minute particles. If there is only a general concept of the body which constitutes the cognitive structure of the mind, there is no particular understanding of *this human body.* Consequently, such a general intellect would not know where to start interpreting the ways in which the body is affected. The problem gets worse if we count in the distal causes. There is an infinite number of causes that affect any body at a given time, if we count in Spinoza's assumption that extended matter consists of a *plenum*[122]*,* in which there is an infinite

[121] See 2p16p. He tells the reader that the principle at work is in 2p13s, Physical Digression, Axiom 1 after Lemma 3. The axiom reads: "All the ways in which a body is affected by another body follow from the nature of the affected body together with the nature of the body affecting it, so that one and the same body may move in various ways in accordance with the various natures of the bodies causing its motion; and, on the other hand, different bodies may be caused to move in different ways by one and the same body."

[122] *Plenum* is a 17th Century term of trade referring to the physical theory according to which extension is thoroughly filled with matter, and is infinitely divisible, i.e. homogenous.

descent of ever finer patterns of motions. Even if we grant that the mind "perceives" all those various bodily changes and those infinite causes behind them, none of it explains what sense perception is *in humans*, which is clearly Spinoza's target. Surely, the relevant sense of sense perception involves the operation of the brain and their co-operation with sense organs, not the bodily changes brought upon by dust particles bumping against one's toe.[123]

The only way that I see Spinoza can avoid the above problem is that the causal involvement theory of sense perception depends on a particular idea of this physiological structure. If the mind is an act of understanding of the body's causal structure, then Spinoza's account of sense perception as causal involvement becomes intelligible, as laid in the explanations above.

3.4.3 Passive Mental States Are Inadequate Understanding

Passive mental, such as sensations and feelings, are inadequate body cognition. What that means is that the mind's cognitive structure cannot generate the changes of the body's state from its innate cognitive resources. The mind is only an understanding of the

[123] This interpretation of Spinoza helps to forestall the criticism of the explanatory power of Spinoza's view as maintained in Wilson (2001). Wilson argues that Spinoza's thesis that the mind is the idea of the body does not coherently explain what representation is because it does not explain how mental states represent external bodies. She also argues that Spinoza's view does not explain why we are conscious of certain things and not. Although, we don't have the space to do so here, we think that Spinoza's view can accommodate reflective consciousness. Insofar as Wilson is referring to any aspect of qualitative consciousness, I believe her estimation is correct.

operation of the body, and consequently that understanding does not include what happens to the body given the influence of external things.

It is easy to see what a passive state in a body is physiologically: When the organism is lead by environmental cues to, say, find its way to a piece of food, it is passive because its food finding activity depends essentially on those external factors. The story on the side of the mind is more intriguing. One might expect that the passive state in the mind is where the thinking subject is affected with a perception from an external source.

That view of sensory feeling does not work in Spinoza's theory. He does not think that the exterior boundary of the mind is defined by an interactive communication with its body. He thinks that the mind cannot be affected by its brain, unlike in Descartes' theory. Therefore, Spinoza cannot go with the Cartesian story that the mind is externally affected, i.e. passive. According to Descartes, the mind sphere of action is delimited by sensory pushes and pulls induced by its body. In contrast, Spinoza thinks that the mind interfaces exclusively cognitive states. Therefore, the mind's boundaries are set exclusively by cognitive factors.

The talk about the mind's exterior as being cognitive can sound bizarre if one thinks that being external to a mind involves a distinction between two subjects, for example, between the mind and body or between the mind of a human being and the mind of God.

Spinoza has a brilliant answer to that worry. The mind's "interior" consists of its cognitive structure. All ideas which the mind forms are modifications of that cognitive structure. So, ideas are *in* the mind in virtue of being understood by the means of that

cognitive structure. In other words, the interior of the mind is what is within the *range* of its power of understanding.

The exterior of the mind consists in what the mind does not understand. Therefore, feelings as affectations of the mind are those ideas which the mind can only form due to some external information, the nature of whose source the mind does not understand. Feeling in the mind straddle the boundary between the mind's interior and exterior. When the idea of the body is modified with a change, the mind works to incorporate that change within its understanding. Because the mind uses its cognitive structure to take on the change, the idea is part of the interior of the mind. But because the power of understanding cannot form the idea of the mind's affectation from its cognitive structure alone, so the understanding is not adequate. The source of the affectation in the mind is in some other cognitive structure which is not part of the mind's cognitive starting point. The exterior of the mind is a limitation of its understanding.

This makes sense of Spinoza's famous remark that sensory cognition from the mind's point of view is like having conclusions without premises.[124] The crux of the metaphor is that sensory information is given to the mind from the outside. If the mind were to also understand the nature of the thing that causes the sensory information, then it would possess the "premises" from which the way in which the mind is affected could be concluded.

[124] See *the Ethics*, 2p28s.

Spinoza's view of perception as inadequate understanding gives also an interesting account of how the mind *learns or discovers* that it is limited and has boundaries. Let me explain that by way of contrast to Descartes' theory again.

Descartes says that perceptions are those mental states where a cognition occurs in the mind against its will. This way the mind learns that the source of sensory ideas is outside itself. The Cartesian mind recognizes that the human body is this other, partly alien thing to which the mind somehow united. All other bodies are likewise part of that outer world of things because they also produce sensory ideas in us against our will, albeit through the medium of our body.

Spinoza, on the contrary, thinks that the boundary of the mind is only drawn in understanding. Perceptions of other bodies are ideas which appear in the human mind without being causally inferred through our innate, constitutive understanding of our body's nature. When it reflects on those ideas and its own innate resources, our mind recognizes that it does not understand everything, i.e. the human mind is not infinite. The existence of sensory affections, i.e. ideas of changes in our body, requires some intelligible cause through which they can be understood. There must be other loci of intelligibility, cognitive models of other bodies, which exist beyond the human mind.[125]

[125] This commits Spinoza to an assumption that there is a global cognitive model of the whole Nature of which the human mind is a part. That is what Spinoza means when he claims that the human mind is part of the infinite intellect of God. See 2p11c. Each finite mind is a particular cognitive model of a finite body. The global cognitive model occupies an intellectual point of view in which the cognitive states of finite loci of intelligibility are understood together, forming a faithful intellectual image of Nature. Spinoza's view of minds is non-physicalist in the sense that it postulates that cognitive activity is not just a special kind of material activity taking place in the neurons, but a local part of an infinite understanding. Even though Spinoza's view is not physicalist, it is still naturalist in an interesting way: it postulates that

3.5 Discussion

3.5.1 The Idea of the Body Is Not a Perception

Spinoza's thesis that the mind consists in an understanding of its body has one major, alternative interpretation. I believe this interpretation is somewhat misplaced, and a careful reading of the text should dispel that interpretation. However, I also believe that it needs to be explicitly addressed because of its distortive power on our understanding of Spinoza.

That interpretation would be that the mind is a *perception of its body.* By perception, I mean the kind of cognition in which the mind is affected by an object. Perception, then, is modeled after the sensory, especially visual, kind of cognition. In the naïve meaning of perception, the sensory organs of the body are affected by some distal body and consequently, the mind is also affected by the sensory image of that distal body. However, in Early Modern period there seems to have been a more technical and general notion of perception which does not regard the body as a necessary middleman. In this view, the mind itself perceives something simply when it is affected by something. For example, in the 6th Meditation, Descartes talks about sensations and imaginations as

cognitive activity is a primitive causal power in Nature. Thus, the human mind was not created by an act of Divine will, but rather is part of the self-understanding God-Nature. There is much to be said about this topic, but it falls outside the scope of this dissertation.

being states in which the mind is passive in relation to some external, active power. This passivity lies at the interface of the mind and the source of that perception. That passivity is what is definitive of perception, not the fact that the mind is united to a body which has receptive sensory organs and a brain for processing neural signals. Of course, the body is needed to activate or enable the perception in the mind, but the notion that there is a perception is already understandable when the mind is affected by something that is not formed by its own active power.

Perception as a receptive affection of the mind stands in contrast to an act of understanding. I have been arguing throughout this chapter that the mind is an act of understanding which takes the nature of the body as its presupposition or as a given.

Now, an argument must be made why the idea of the body cannot be just a perception of the body. The crux of the argument is basically that such a view would not be able to accomplish everything that Spinoza intends his theory of cognition to accomplish. Let me quote Kuno Fischer's recognition of the same problem:

> If the mind were only the idea of the body, then one could be tempted to think that the mind relates to the body as a replica to its original, or as an impression to a thing which brings forth that impression. It could seem that in the idea of the body the mind has a sensory and determinable being, whereas the body is what determines and forms the mind's being; that the mind is passive and the body constitutes the active factor in *idea corporis*; that, finally, considered in itself the mind is similar to a blank surface which receives its representations from the outside.[126]

When Fischer talks about the mind being *only* the idea of the body, he is talking about

[126] See Fischer (1865), p. 441. My translation.

the mind as lacking the power of understanding. If we don't see Spinoza's motive behind asserting that the power of understanding constitutes the mind, then we are bound to interpret phrase "the idea of the body" in a passive and receptive sense. The mind would then be a mere complex observation of whatever happens in its body. Because the mind is completely determined by perceptions of its bodily state, every cognition of the body is a given cognition. For example, suppose that I were to decide to move my hand. That decision would be not something that the mind does but rather something that happens to the mind because it is given a perception of that the body is moving its limb.

The consequence of the view of the mind as a mere perception is that there is no sense in which the mind is a thing which does something in virtue of its own power. In other words, there is no conception of what the power of the mind is. Spinoza's view is that the mind acts and is acted upon in a way that agrees with the corresponding states of the body. For example, when my body is weakened by a burn in its limb, the mind is correspondingly acted upon and weakened. In contrast, when the body is determined to move its limbs when walking to the grocery store, the mind is simultaneously actively thinking through the causal paths of that bodily task. This intrinsic agreement in activity and passivity between physiological and cognitive states is fully removed if the mind is a perception of its body, because all the states of the body are equally given to the mind as perceptions.

If one takes the view that the notion of the mind is constituted by a perception of the body, then one has difficulties in explaining how exactly Spinoza explains the mind's relation to all the practical aspects of human life. It is clear from Spinoza's Ethics that the

mind very much engages in the social sphere: our mental life involves affects, desires, social imagination and the use of reason to structure one's life. *Prima facie*, the problem is that those activities are mind's activities, but at the same time those activities depend on the body. Now, if one accepts that the mind is a perception of its body, then one must explain how the mind is actively involved in those bodily activities. Maintaining that the mind perceives one's body as being engaged in social activities is not a satisfactory answer, because the perceptual relation indicate that the mind is not performing or doing those social activities itself, but merely observing them in the body.

So, the problem with the alternative interpretation is it leaves no original active power in the mind. By the activeness of the mind, I mean the capacity of the mind to form actions and responses which are expressions of its own nature. If the mind is, in contrast, a perception of its body, the body is what takes the active role in the human being. The task of the mind is rendered fully passive and receptive where the contents of the mind are dictated by the states of the body.

An argument for the claim that the starting point of cognition is an understanding of the body, rather than a sensory awareness of the body, lies in the task of the mind, which is understanding. The mind is thoroughly cognitive—not because its cognitive structure consists of a perception of its body—but rather because the mind is constituted by a complex act of understanding. Ideas are expressions of the power of understanding. As Spinoza himself emphasizes, ideas are not mute pictures on a tablet.[127] By this he

[127] See *Ethics,* 2p43s.

means that the nature of an idea cannot be explained by a referential relationship. Consider for example the written word “body”. Our minds interpret that string of symbols to stand for the physiological structure that exists outside the mind. This referential function is fine for tasks of mundane communication but not for what Spinoza views as the task of thinking, which he views to be understanding. That is because the word “body” does not express the structure that is in the physical body. An idea needs to affirm the structure of its object in a rich way that exhibits the causal explanation of operation of its object nature. In this way symbols and images are inadequate for the task of understanding.

The mind is not a perception of its body because the mind needs a substantial starting point in cognition. The sensory information is too fragmented and piece-meal to be a basis for understanding what the human body does. The mere awareness of having a body, e.g. having a hand that is available for one’s use, does not give cognitive insight of how the body is determined to function as a physiological being which consists of various biological strivings structured together to keep the body in existence. Sensory awareness does not promise a credible account of how the mind forms ideas that follow the causal patterns existing in nature.

As we saw in Section 3.4, the relationship of understanding and perception is the converse. The mind doesn’t begin in perception and draw understanding from that, but rather Spinoza thinks that the mind begins in understanding and its capacity for sense perception is dependent on that.

3.5.2 The Cognitive Model and Association of Ideas

There is a second objection that is closely related to the one above. This objection comes from the interpretation that the mind is a collection of perceptions of what happens in the body, e.g. a collection of sensory images that are gathered together into a complex perceptual structure that together make up the idea of the human body. The second objection claims that the connection between ideas is associative. The objector would point to 2p18s as evidence that the basic causal mechanism by which mind moves from idea to idea is *associative*. This seemingly contradicts the main interpretation of this dissertation according to which the mind is a cognitive model of the operation of its body and thus proceeds from idea to idea by causal inference, i.e. by understanding.

First, the cognitive model view denies that the *basic* operation of the mind is associative. Second, the cognitive model view can subsume the associative mechanism.

On the first point, the mind's basic operation is understanding, i.e. causal thinking. Spinoza cannot have a purely associative view of the mind's operation since the mind is a cognitive model *of its body*. Let me explain.

In an associative model of the mental operations, the basic unit is a sensible stimulus or percept, e.g. a conscious sense impression. The associative operations synthesize simple percepts or sensations into more complex ones.[128]

Spinoza says that the idea of the body is a complex idea consisting of ideas of *parts*

[128] As a prime example of this view, see Hume, pp. 2–3, 11.

of the body.[129] Since an associative theory of mental operation needs some class of cognitive simples to operate on, those ideas of bodily parts would play that role. Now, an associative theory describes how percepts, e.g. sense qualities, are combined. That would mean that at the most basic level the mind's cognitive structure would consist of *percepts* of the parts of its body. That reduces the associative interpretation of Spinoza's view back into the theory we dealt with in Section 3.5.1.

The problem is two-fold: First, it is *prima facie* implausible that the mind consists in *perceptions* of body parts. Sensations (pain, touch, taste) are cognitions of what happens *to* the body, or *in* the body, not sensations of body parts themselves. Similarly, perceiving another body is not a *perception* of arrangement of body parts.

Second, if association were the basic operation of Spinoza's mind, there would be very little hope of causal cognition that would help the mind to cognize external bodies or even the human body itself. Even if the mind perceives each individual particle in the body, its more complex cognitions would be only compounded series of percepts of body parts. How would the mind move from the association of perception of body parts to an idea of an external body? The external body is not itself a part of the body or any compound of the body parts. Therefore, it is quite clear that the mind cannot form any associative pattern that is a perception of an *external* body. Since the mind's basic operation would be mere association, it would have no further tools of understanding and inference to form an idea of an external body.

[129] See 2p15.

On the contrary, we can argue that Spinoza's view that the mind is an understanding of its body can subsume the association of mental images and memories as a derivative or secondary feature of the mind. The association of mental images is just a mechanism that depends on the body's constitution. It is not a fundamental operation of the mind. Human beings just happen to have brains which are capable of storing and repeating patterns of neural activity under certain circumstances. The associative links between brain "images" are forged because of the structure of the human brain. The human mind is an understanding of the causal structure of the body, so it is also a cognitive model of the brain's operation. When the mind forms an imaginative idea, that idea is a particular way in which the mind understands its body's operation. The cognitive model is then internally structured to be an understanding of the associative links forged in the brain. When the mind has one imaginative idea (e.g. my memory of my home), it will also produce another mental image (e.g. my memory of the smell of freshly baked bread) if there is a physiological, causal link between the brain patterns that correspond to those memories.

This physiological, causal theory of association (and its cognitive counterpart) is in my view more sensible than the theory that the mind could understand everything from sensory association between percepts of body parts. If it were so, Spinoza would have difficulties of explaining why the mind perceives only those particles of matter that are within the body and not those that are outside it. If we suppose to the contrary the mind is an understanding of the operation of the whole bodily organism, it has innate resources of distinguishing between what is inside its body and what is outside, because all

sensations and percepts are subsumed under the cognition of this particular body.

3.5.3 The Mind's Task Is Not to Help the Body

According to one pre-philosophical intuition, the task of the human mind is to help its body. For example, when I feel thirsty, the mind's task is to guide and move my hand to grab a bottle of water. The role of the body is to act as a sort of an extension of the mental agent but also the receiver of the mind's guidance. If one is under the influence of that kind of intuition, one could adopt the following kind of interpretation of Spinoza's view: The mind as a cognitive model of its body is beholden to be a follower of its body. The mind's task is to predict the behavior of its body and form thoughts which guide the body towards the optimization of its physiological functions.[130]

That kind of interpretation maintains that the body is just one instance among the class of objects presented in conscious thought which the mind operates on in its thinking processes. For instance, we could imagine that the mind has thoughts of the kind "This piece of food will help the body." or "I have to move the body away from the stove, it is about to get burnt." Of course, one does not have to formulate the interpretation exactly in terms of such linguistic thoughts. The general point which I

[130] Spinoza even says things to that sound like this. See 3p12 and 3p13. As an example of a view according to which the mind's task is to help the body, see LeBuffe (2010), p.113. LeBuffe argues that the mind's task is to think in ways that help its body to preserve its being and also become more conscious of its task of doing so. We will talk about the practical aspect of cognition in Chapter 4. We don't want to claim that LeBuffe has arrived at his interpretation about the role of the mind through the interpretation of idea of the body we are offering in what follows. Perhaps he takes 3p12 and 3p13 at face value without juxtaposing them with the idea of the body view.

want to make is that if the mind's task is to help its body it would be required that there is a representation, "my body", which maybe special in some ways, but it is still a presented object among other presentations.

One source of that interpretation can be seen in Spinoza's dictum that the mind is an idea *of* the human body. A common way of thinking about what ideas are is that they are built around the subject-object model. According to that model, an idea is a mental item that is *presented to* a thinking subject. An idea that is something we have in our awareness and which we can inspect with our mind's eye, as it were. To use a Kantian term, that view invites us to think that Spinoza's mind takes its body as its *Gegenstand*. Spinoza's view would then be that the mind as an idea relates to its body as a thinking subject relates to an object presented in consciousness.[131]

Now, this objection is removed if reconsider what ideas are according to Spinoza. They are not modeled after the subject-object relation. They are acts of understanding. An idea grasps the how and why its object nature, namely what it takes for that thing to exist. An idea is a causal account of the nature of its object. One could call them cognitive acts which are structured as real definitions of their object's nature. To take an earlier example, when a master mechanic is fixing a car, her thinking activity is structured as it were to be an account of how the car operates. Quite plausibly that understanding and the mental actions deriving from that understanding are independent of whether or nor

[131] Spinoza explicitly denies this kind of view when he says that the mind cannot cognize the body's existence except through ideas of bodily changes. See 2p19. Those ideas of bodily changes depend on the existence of the idea of the body, i.e. the human mind. See 2p11d and 2p12d.

she holds some kind of mental diagram of the car's structure in front of her mind's eye. The Spinozistic way of conceiving ideas does not depend on the metaphor of something being *presented to* the mental observer or thinker.

Following the above conception of ideas, we can interpret the view that the mind is an idea of its body in another way: The understanding of the body constitutes an intellectual starting point from which the mind always begins its thinking processes. Since the understanding of the body's operations and causal nature is built into the cognitive structure of the mind, the mind is internally bound to think in ways that agree with the physiological operation of its body. The mind does not have to explicitly carry around in its thinking a representation of its body, a special object labeled "my body". Instead, the mind's thinking activity is structured around its internal model of the body's operation. That way the mind's formation of perceptions and inferences requires only ideas of bodily changes without actually presenting the body itself. The understanding of the body and the affirmation of its existence forms, as it were, an intellectual point of view through which the mind can think more thoughts that agree and follow from its internal structure. But because of the constitutive role that the nature of the body plays in the mind's internal structure, the mind's task of forming true ideas and understanding things as much as it can will in fact lead to cognition of actions that help the body. We will explain this last point in the next chapter when we talk about the mind as internally structured to be a self-regulative idea.

3.5.4 Comparison with Leibniz's View

The main contemporaneous alternatives to Spinoza's view would be Malebranche's occasionalism and Leibniz's pre-established harmony. Malebranche's view asserts that there is mind–body communication, but that communication is in fact God's causal activity, where God as the only true causal agent sets the mental states and the bodily states in agreement.

Leibniz's view is trickier because it relies on the view that minds are monads, self-contained agents, and bodies are virtual entities existing as perceptions in those agents. The pre-established harmony is that all the virtual perceptions of each monad are harmonized with one another, so that what all monads are perceiving the same physical, each from the perspective of their bodies. The body to which the mind is united is in the Leibnizian framework that an object of perception but one most distinctly perceived by the mind (Monadology, section. 62).

There are two major differences between the views of Spinoza and Leibniz: First, Spinoza does not think that minds are monads which simulate everything that happens in the physical world. The mind is only a model of what the causal structure of its body alone, and its cognitive states are ideas of what happens to the body. The idea of the body is in this way cognitively prior to ideas of other things that the mind might form. The mind models other bodies only derivatively as modes of its ur-cognition of its body.

Second, Spinoza does not think that there is a special agency to the mind, e.g. an undetermined, absolute faculty of willing. Therefore, there is no need for Spinoza to

postulate a separate noumenal level of existence where there is causal "room" for the spontaneity of the mind's activity.

4 Life and Feeling in Spinoza's Purely Cognitive Mind

4.0 Motivation

Spinoza concludes a long exposition of his view of the mind–body union with the following statement: "Mental decision on the one hand, and the appetite and physical state of the body on the other hand, are simultaneous in nature; or rather, they are one and the same thing [...]"[132] Spinoza is talking here about the relation between the mind's practical activity and the physiological, conative tendencies in the body. The first part of the statement might appear innocent, because it is merely saying that mental and physiological states are simultaneous which could be—in one form or other—accepted by many. However, the latter part of the statement says that the practical activities of the mind are somehow the *same* as physiological conative tendencies. After this statement, Spinoza promises to the reader that the issue will become clearer during later discussion. Considering the relentless pace and density of Spinoza's explanations, this capitulation strongly suggests to me that the roots of the quoted statement run deep into Spinoza's mind–body theory.

In the previous chapter, we have characterized the mind as having only a single

[132] See 3p2s.

operation, namely that of understanding. The heart of that insight was that the mind is an understanding, or to put it differently a cognitive model of the physiological operation of its body. The mind's cognitive activity models the causal efficacy of the body as a physiological system. This gave us an account of what bodily sensation and bodily action are in the mind. They are modes of body cognition. The mind cognizes how idea of the causal machinery of the body responds to informational changes about the dynamic state of the body.

In this chapter, I'm going to develop further how Spinoza's view of the mind–body union is such the slogan "the mind lives the life of its body cognitively" applies also to the mind as thing that is in a sense alive.

In Chapter 3, my explanation of Spinoza's theory accounted for the mind nature only to the extent that it as a cognition of a *causally efficacious* system. What that does not give us yet is that the mind is alive. Spinoza's complete theory of the mind will involve that the mind is a cognitive model of a living body—a body that has integrity and agency of its own as a system. The causal tendencies of the body are such that they form together an organic body. By organic, I mean that the body's causal structure is determined to preserve itself and regulate its activities. The mind's cognitive structure must somehow reflect that. Let me now motivate these statements.

One of the overall targets of the dissertation is to show what it is for the Spinoza's mind to act and feel.

That goal finds a corresponding element in Descartes' philosophy. Descartes thinks that the capacity to act and feel requires a special practical power of the mind,

namely the will. I will give a short explanation of that. The mind is a living thing in the sense it has some end or good which it pursues. Things can go better or worse for the mind in relation to its pursuit of that end. The will is the power of the mind that is directed towards the good. The will is also capable of pursuing that good because it can make free, undetermined choices. Because the mind has that kind of agency that is responsive to the good, things can go better or worse for the mind. Feelings, like suffering and joy, and actions, such as decisions, are mental states which in part consist in things going better or worse for the mind. That's why in Descartes' view they are modes of the will.

Spinoza would agree that feelings and actions in a proper sense are attributed only to a thing that is alive. For a mind to be capable of feelings and actions, the mind be something like an organic agent: a being which is capable of doing better or worse, desiring, protecting itself and at large, caring.

However, Spinoza does not think that the mind is a separate agent from its body. In doing so, Spinoza has given up the view that in the mind there is a separate power of willing.

He does think that there is a sense in which there is notion of an active life tendency, which he calls a *conatus*, which gives a basis for attributing feelings and action in a deeper, practical sense to the mind.[133] Spinoza's approach differs from Descartes' in that the account of feeling and action in living things is equally physiological and

[133] See 3p7.

cognitive.

Spinoza's views about the natures of the human mind and its body are proto-biological. This is clearer in the case of physiology where he thinks that the human body is a dynamic and complex system of motions which is self-regulative due to its causal structure.

If we think biologically, it is not difficult to think that appetites and feelings are states of an organic being. By organic, I mean that its constitution in the sense that is constituted by a self-sustaining activity. What corresponds to feelings in the body are states or modes of self-regulative tendencies of the body. Physiological appetites consist in internal pattern of activities whose external causal expressions sustain and support the body's operation. Bodily suffering consists in a state where the body's life activities are disturbed and inhibited. For example, when some limb of the human body is poked with a needle, the whole body initiates a centralized response to recoil away from the needle since the sharp point threatens the structural integrity of the body. According to Spinoza, pleasure, or more properly its bodily equivalent, consists in the fluidification of physiological operation, an optimization of the causal tendencies of the body.[134]

These physiological reactions are of organic origin because they are modes of an underlying system with conative, or self-regulative, tendencies. Spinoza at places refers to the conatus as a force of existing.[135] By this he means that every living thing is structured

[134] See 3p11.

[135] See *the Ethics,* General Definition of Affects in Part 3, and 4p4d. The Latin term is "*vis existendi"*. The notion of force is something that signifies a tendency to produce effects, something that combats and

so that its causal structure is self-sustaining, tending to increase its causal power when in a suitable situation, and also resists external efforts to reduce its causal power. Since Spinoza considers bodies as patterns of motions, and motive tendencies as being causally efficacious, it is easier to understand that the physiology of the body constitutes that kind of force of existing.

How an analogous conative tendency could apply to Spinoza's view of the mind is trickier to understand. That is because Spinoza thinks that the mind's only operation is understanding. Since Spinoza's main thesis about the mind is that it the idea of its body, the appetites, feelings and decisions are that they are cognitive states in a very specific sense. Spinoza's theory dictates that the mind is a cognitive model of its body's operation. During this chapter, I will try to explain a thesis that feelings, appetites and decisions in the mind are states of and variations in the cognitive model of the body's nature. They are changes in the mind's essential understanding of the body's operation.

Spinoza's cognitive model view of the mind seems to entail that the mind is a mere dispassionate and unaffected observer of what is happening in the body. On the contrary, Spinoza maintains that even if feelings, appetites and decisions are purely cognitive, they are also variations and effects of the mind's life activities. This gives them a nature that goes beyond mere dispassionate perceptions and machinelike inferences performed by a cognitive model.

The problem in this chapter is to determine what it is for a (human) mind to be a

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resists other forces. It seems to me that the term is meant to evoke a contrast to a mere effortless existence.

conative, living being that feels and acts, while at the same time taking into consideration that Spinoza thinks that the mind's only function is understanding. That challenge involves explaining how it is that things can go better or worse for the mind insofar it is a cognitive model of its body's nature. That is difficult. On the face of it seems that if the mind's task is to only understand, then it appears that there is no organic principle in the mind which would render it responsive to anything that happens to it.

On the textual side, the core issue of this chapter can be pinpointed to the propositions 3p2 and 3p9, of which the first one I quoted at the very beginning. In 3p9, Spinoza clearly talks about the mind having a conatus, which he describes as involving will, desire and appetites.

There is also a textual basis in The Ethics for this difficulty. In propositions 3p2 and 3p9, Spinoza clearly talks about the mind's conatus and also talks about that it is in some way the *same* as the physiological appetites and tendencies of its body.

However, In the propositions that fall between those two he develops a theory of what the conatus is.[136] The problematic part is that he does not explicitly mention either the body or the mind. Spinoza's discussion is almost too abstract. It seems that he thinks he can explain the self-regulative tendency of living beings just by metaphysical reasoning starting from what looks like the general notion of a real being. We will come to explain the notion of a real being in the following discussion.

[136] Propositions from 3p4 to 3p8.

As I mentioned, Spinoza has explicitly said that the mental decisions and the appetites in the body are one and the same.[137] That indicates that the mental conatus and the physiological have the same relationship of sameness. Since Spinoza thinks they are the same, then it seems to be only natural that he can treat the topic of conatus, or organic striving of living beings, without reference to mind or body specifically. His explanations make that mind is alive and striving in the same way, or by the same principle, as the body is.

But that cannot be right, or to put it more accurately, the grounds of such a claim are obscure. Cognitive and physiological activities are in themselves different from each other. Cognitive activity consists in understanding which is a kind of an intellectual causal *account* of a nature, as we explained in Chapter 3. Physiological activity does not share that feature. Instead, it consists in the causal efficacy of motive tendencies.[138]

In the demonstration of 3p9, Spinoza transitions from his view that the mind consists of ideas to the thesis that the mind's conatus is to strive in its being insofar it has those ideas. What this means that the mind strives to preserve itself insofar it is a purely cognitively activity— a cognitive structure. The mind, then, is alive in the sense that it regulates its cognitive structure. This renders the mind in some yet unspecified way

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[137] Cf. Earlier quote from 3p2s.

[138] Spinoza believed, as many other philosophers in the Early Modern period, that motion is real and causally efficacious. I think many of Spinoza's points would remain intact if the term "motion" would be substituted with, say, the Newtonian terms of "inertia" and "force". By this I mean that the things that Spinoza says about physiology are meant to be placeholders or schemata which can be updated by later discoveries. Spinoza explicitly says that what he has to say about human nature does not require a full-on treatise about general physics or about human physiology.

protective and responsive. Spinoza is gesturing that the mind itself is analogous to an organism whose tendencies are structured to ensure its survival and optimize its level of performance in its given environment.

The tricky part is that Spinoza's given explanation does not seem at all adequate in its terse form! The core tenet of Spinoza's theory of the mind is that the mind consists of only ideas, which are, as he clearly says, acts of understanding. The inadequacy or gap in Spinoza's explanation is that he has not clearly explained what it is for the mind as a purely cognitive activity to preserve the integrity of its structure and what it is for the mind to do better or worse in its life activities.

It is clear from Spinoza's main thesis that the existence of the mind is tied to its existence as an idea of the body. The missing component is how exactly the mind "protects" its own existence qua *being an understanding of its body*, and what it is for the mind to do better or worse qua *being an understanding of its body*.

The mind consists solely in cognitive activity, in other words, understanding is what the mind does and nothing else. There is no further motive or ulterior end to understanding. The mind cognizes things just because it is its job to do so. In this way, the mind as a purely cognitive activity seems to be a mono-manic cognizer who merely intellectually observes everything that happens in its body. That kind of mind would be more like a technician that diagnoses the state of its body, but who does not herself live through the setbacks and successes in the bodily life. In that view, there does not seem to be any corresponding factor of feeling and action in the mind itself.

The solution which I present in this chapter relies on the theory of body cognition

that was developed in the previous chapter. I will argue that the mind does better or worse insofar it is able to its activity of *understanding* is doing better or worse. The key element in that is that we avoid the more general point of view in which the mind's cognitive activity is universally directed to any object of understanding. Instead, Spinoza argues that the mind occupies a particular, localized point of view of its body. The mind's activity of understanding starts in the given idea of its body, i.e. the mind's union to the body through cognition. We will see in the end why that means that the mind's cognitive life is not at all distanced from the physiological conatus.

4.1 Why the Term "Conatus" Applies Both to the Mind and to its Body

As I stated in the introduction to this chapter, the justification why Spinoza can talk about the conatus of any being in neutral terms is not clearly laid out by him. Let me give one justification.

Spinoza uses the term "conatus" to signify the biological tendency towards self-preservation and optimization of life-activities that is characteristic of living things. I want to draw attention to the following passage: "The striving by which each being strives to persevere in its being is nothing beyond the actual essence of the thing."[139] There are two important aspects in that proposition. First, Spinoza characterizes conatus in terms of no particular reference to either physiology or cognition. Second, the striving of a

[139] See 3p7.

being (another term for *conatus*) is identical to its essence.

Consider what is being claimed by the sentence "striving of A is nothing but the essence of A". This is not just a claim about identity of conatus and essence, but that an explanatory claim. The explanandum is the term "striving", not "essence". Suppose that I claim that snow is nothing but water. In doing so, I am making a claim about the nature of snow, not of water. So, properly said, Spinoza is making a claim about what conatus is, not what the nature of, say, a human being is. The reason why he is interested about explaining conatus is that he wants an account of what is to be a living being that does not rely on some special characteristic that only either minds or bodies can exclusively possess. The essence of any particular being, mental or bodily, is what drives that thing forward. That driving "force" just is the nature of that thing. Because conatus just is the nature of the thing, it is particular to the kind of structure and activity that constitutes the nature of the thing in question.

The point behind that proposition is that there is no special ingredient that needs to be *added* to living things in order to render them alive. I do not mean that there is no distinction between my coffee table and myself. The coffee table is not alive, whereas I'm a living thing. Instead, what he means is that there is no life force or inclination towards organic good that needs to be added to the nature of a human being. That would run the explanation into the other direction: The essence of a thing is nothing but its conatus.

Spinoza's theory of conatus is another expression of Spinoza's particularism or nominalism. There is no separate, universal principle of "conatus" such that the very same thing exists both in the mind and in the body, both in a horse and in a human being. This

is important because if that is the case, it would be grounds to deny that there is a life activity in either the mind or the body. For example, if it would turn out that the source of life is the soul, we could say that a body is living only because there is a soul that animates it. Equally, one could claim if life is principally a physiological characteristic, i.e. life consists of motive activities are self-sustaining, then one could say that the mind is alive only because it is united to the body. It is expedient for Spinoza to block that latter option because it would make the mind a merely secondary or derivative thing in relation to its body.

Spinoza does not claim that he has an adequate account of the essence of, say, a particular human being. Despite that, the notion of an essence can be used to explain the notion of conatus in its abstract form. This is because Spinoza holds a view that essences or natures of things are determinations to act. Thus, Spinoza's theory of conatus is just a special instance of his theory of essence causation: an essence is a causal structure. In other words, an essence consists in certain determinations or tendencies to produce effects.[140]

A conatus is just a particular feature of certain causal structures. It characterizes how causal tendencies in living things are structured so that they sustain and regulate themselves. This abstract schema of conatus can be applied to both minds and bodies, but it does not mean that there is a universal conatus that is shared by them. The

[140] That abstract sounding thesis has a basis in a more general principle: Any real and positive feature of a nature has to make a causal difference, or in other words, nothing exists that is not determined to cause effects. See 1p34s. Viljanen (2011), p. 62, has a more thorough treatment of this thesis and its relation to conatus.

cognitive conatus differs from the physiological conatus as much the essences of the mind and the body differ from one another.

In what follows, I will treat the physiological conatus separately first and then show how the cognitive conatus is at one with the physiological while being at the same time different.

4.2 Physiological Conatus as Self-Regulative Tendency

Above, I argued that in Spinoza's view the essence of a thing explains what the conatus of that particular thing is. The point is that only insofar one has an intellectual grasp of a particular causal structure, one has an account of what the conatus of that thing is.

As we explained in Chapter 3, the human body is a stable, complex system of motive tendencies. The main point is that the human physiology as a system of motive tendencies is a locus of causal intelligibility. That means that there is an account of how and why the human body works as it does. We discussed this Section 3.2 on adequate ideas.

Now, the propositions from 3p4 to 3p9—when applied to human bodies—try to establish that the human physiology simply as a system of causal tendencies is self-regulative. A human body is a conative and living thing simply due to its efficient causal structure.

Spinoza has two goals there: First, he wants to establish that there is a causal account of what a living human body that does not require the addition of some

extraneous notion of a natural end or a life force.

The second, and perhaps more important, goal is that an adequate causal account of the human body is enough to understand how it behaves as a self-regulative being.

Take again the example of the master mechanic who understands the nature of some complex machine. The mechanic has an internal model of how the parts of the machine form one causally efficacious system. That understanding is intrinsically structured so that merely by means of that model the mechanic can understand the causal behavior of that machine.

We need not carry the analogy so far that the human body is strictly speaking a machine. Instead, what Spinoza wants to say that is that the life activity of a human body can be understood from an adequate causal understanding of that system. This forms a crucial conceptual link between the topics of Chapter 3 and Chapter 4 of this dissertation. First, there is the general view that the mind's cognitive structure is akin to a causal account of its body, which we explained in Chapter 3. Next, suppose that the striving and life activity of the human being can be understood simply from the causal account of the human physiology. That will then be the conceptual link of how the mind as a cognitive model of its body can also be a model of the living body. That way the life activities of the body would be cognitively expressed in the activities of the cognitive model. This requires more explanation later, but for now it is enough to point out this connection.

4.2.1 Living Bodies as Real Beings

The success of that connection between a causal understanding of the human body and the causal intelligibility of the physiology of the body can be crystallized into two theses:

1) The nature of being a living body is its causal structure alone (without any extrinsic inclination or additional life force)
2) The life activities of that body can be understood through that causal structure (the mind can be a cognition of the body only insofar the body's active principle is intelligible)

Given the limited scientific resources of his time, Spinoza is unable to justify or explain mathematically why certain bodies in Nature are determined to self-regulative activity. Quite clearly, Spinoza's 17th century knowledge of the nature of bodies does not reveal the true mechanisms of why certain dynamical systems in Nature are able to stabilize themselves, regulate their own internal states and also regulate the state of their environment.

However, Spinoza does not need to provide an explanation of how living systems come to exist in Nature. What he needs is that *given* such a nature, its life activities are causally intelligible through that nature. On the side of the ideas this will mean that from a given understanding of the human physiology the ideas of its life activities can be causally inferred.

Because he does not have resources to explain the underlying causes, he resorts to

an assumption that there are bodies in Nature which satisfy the characteristics of a living thing. This is visible in his claim in 3p4 which he takes to be a self-evident truth: "No thing can be destroyed except by an external cause". In my view, this is not meant to be a universal claim about all thing in the broadest possible sense. Otherwise, that claim would include objects which do not have internal integrity or stability such as a burning fire or a cloud of gas. Rather he is restrictively talking about a special class of beings, namely real beings, a term which I will explain below. That restriction is the assumption that Spinoza makes in order to bridge the explanatory gap in his theory.

That living things regulate their being, that is, "strive to preserve" is understood through rational reflection of what it is to be a real being.[141] "Real being" is a term of trade referring to things which are units of nature, i.e. causally efficacious and stable entities which the science considers Nature as consisting. Since real beings are loci of causal activity in Nature, they are the loci of intelligibility through which the happenings in Nature can be explained. The prime examples of real beings are organisms, such as trees and human beings.

In the tradition before Spinoza, those real beings were classified as substances, which means that organisms were independent causal sources whose activity is not

[141] For a helpful discussion surrounding the issues of the nature of real beings, see Carriero (2017), p. 152. Carriero argues that Spinoza's use of "res" in 3p4 reflects the notion of a real being in the Aristotelian tradition. So, Spinoza is explanatorily excluding from his discussion the so-called *entia rationis*, which are things which we employ in our thinking but do not exist as natural things outside our minds. For example, the northern hemisphere of the planet Earth is a thing, but it is a thing mostly in virtue of our cognitive ability to manipulate our cognition of Nature for the purposes of our thought. It is not a real individual in the same causal explanatory sense as the human body. The human body is a real thing in the sense that it is a unitary, stable, causally efficacious physical system. The *whole* of the planet Earth is closer to that status, the *half* of it less so.

sourced in or predicated on some further natural thing.

In Spinoza's philosophical outlook, all bodies are motive patterns of activity in matter, that is, modes of Extension. The causal power of a body is due to its motive structure which is generates at its birth and must be constantly sustained. The motive structure is what constitutes the causal power of a body, not a Scholastic substantial form which actualizes the potential matter of the body. In effect, Spinoza demotes the status of a real being from an irreducible unit of nature into a locus of activity which has a degree of unity to it.

The unity that is characteristic of a real being goes hand in hand with its intelligibility. Thus, if one understands the nature of a real being, one can also understand what makes it a unity, rather than just an accidental aggregation of parts.

That Spinoza is utilizing the notion of a real being as an assumption is visible when he says that it is "self-evident from the *definition* of any thing that it affirms and does not negate the essence of the thing, that is, it posits, and does not annul, the thing's essence. So long as we are attending only to the thing itself, and not to external causes, we can find nothing in it which can destroy it".[142] Here again Spinoza is leaning on the philosophical tradition in a way that is not apparent to the modern reader. If one considers a modern understanding of a definition, then it is not clear why a definition must be affirmative. Spinoza is referring here to a real definition which must specify the nature of the entity in terms of its real characteristics. That means that the definition of

[142] See Ethics 3p4.

the thing is not a logical construct (such as when a linguistic term is explained through other linguistic terms).

For a thing to have a real definition it must be by nature a unity such the how and why of that thing's causal operation can be understood together under one account. Such an intelligible unity is a real being. So, when Spinoza asserts that it is self-evident that the definition of a thing affirms or posits the essence of the thing, he is drawing on the assumption that there are real beings, namely organisms.

4.2.2 Self-Regulative Tendency as a Causal Tendency

Let us move to the topic of what it is for living things to regulate themselves. We are especially going to pay attention of whether that tendency could be causally intelligible.

First, the system must perpetuate itself in existence. No being can function or do anything if it doesn't exist. So almost trivially, a self-regulating body must be structured to continue its existence at all stages of its actions.

Second, the bodily system also maintains its capabilities. Using his technical terms, Spinoza says that a living being "strives to preserve its being", which means that the nature of a living thing is such that it is determined to maintain its structure.[143]

As we said earlier in Section 4.1., Spinoza thinks that the striving to preserve itself is inseparable from the essence of a living being. The essence of a thing consists in its

[143] See Ethics 3p6 and 3p7.

causal structure. In the case of a living thing, its continued and stable existence is precisely due to it being a structure that is determined to regulate itself. One cannot separate the constitution of a living being from its essential activity. A plant, for example, has a structure that it grows new leaves to replace dead ones. A plant can do so because it has leaves which contribute nutrition towards the growth process via photosynthesis. This "self-affirming" dependence between the system's structure and its self-regulative activity is why maintaining stability is the essence of a living body.[144]

I suggest a useful way of understanding what the physiological conatus is so that a causal account could still apply to it. The best way to start to think about conatus of living bodies is to suppose a simple organic system and work towards a more complex one.[145]

Suppose that there is a simple organism, such as an amoeba. The amoeba is structured such that it maintains the level of its causal power. By doing this the amoeba implicitly protects and preserves its existence because when it can retain its causal capacities, e.g. its metabolism, it will necessarily also stay alive, because the core causal capacities of a living body are those which render it alive.

Spinoza says that a living being strives to preserve its existence and its being as far

[144] Carriero (2017) contains an incisive and comprehensive treatment of Spinoza's view of physiological conatus. I'm indebted to his way of thinking about the physiological conatus as being the same as the motive tendencies that constitute the body. Further, I owe him the notion that the structure of those motive tendencies is constructed out of global physical, geometrical and kinetic invariances of Nature, which is a close description of how Spinoza is thinking about laws of nature.

[145] This approach is suggested by the Physical Interlude where the nature of a complex body is to be a system where simpler systems are operating in an invariant manner, so that the overall pattern of activity of the body stays the same.

as it is able and as much as it is in itself.[146] This is a thesis about the self-regulative activity of the body and its connection to the causal power of the organism. That the organism is always constantly exerting all its available resources for keeping its physiology running *under current environmental circumstances*. For example, when the body is fighting a fever, its immune system is doing its job to the extent that the body has causal resources for that task.

I propose a reading of the body's conatus as a kind of an economy of causal power. The body is a system with a certain amount of causal power at its disposal at each moment and it is allocating it to different tasks. What makes the body into a self-regulating system is that it allocates the body's causal power to those tasks which maintain the body's capacity for its life activities.

This is an interpretation of the conatus which brings together efficient causation, the nature of a living being and the conatus. Spinoza says that "the conatus is nothing beyond the essence of the [body] in action."[147] As I explained above, the nature of a being is the same as the causal power that it is structured in running the operation of the body. The term "in action" means that the causal power is doing constantly "online" in the present. The body must be always in motion, because if the motions of the body cease, the life functions of the body also stop. The maintaining of this constant online state the

[146] See Garrett (2002) for a careful analysis of these terms and the argumentative strategies which Spinoza employs in developing his theory of conatus.

[147] The Latin version reads: Quare cuiuscumque rei potentia sive conatus, quo ipsa vel sola vel cum aliis quidquam agit, vel agere conatur, hoc est (per prop. 6 huius) potentia sive conatus, quo in suo esse perseverare conatur, nihil est praeter ipsius rei datam sive actualem essentiam. (Emphasis by me.)

organism requires that the constant allocation of causal power. In this way, the organism's nature is the same as the structure of its efficient causal power. The organism is alive because the organism is structured to constantly allocate that causal power to maintaining its capacity for acting.

From this way of thinking follows an explanation of why the conatus is accepts increases in the organism's capacity to act—which Spinoza calls the state of being more "perfect" or "real". What I suggest is that the organism strives towards higher or optimal level performance only through occurrent increases of its causal power. By *occurrent*, I mean that the interaction with the body's environment has already increased or stimulated the organism's causal power in some way. That can be illustrated by the example of the sensitivity of an amoeba to a nutrient gradient. An amoeba's body does not have a purely internal determination towards the distal food source. Rather, because the body has already been increased in its performance by interacting with a higher level of nutrition, that increased causal performance determines it to persist in the activity of eating. The amoeba's striving to keep eating the food—its appetitive behavior—depends on the occurrent bodily changes due to its encounters with the food.

I have presented an interpretation according to which the self-regulative conatus is not a purely internal cause of the optimization or increase in causal power. The increase in capacity to act happens as a windfall due to the occurrent changes in the *situation* where the body is. The self-regulative nature of the body is the tendency of holding onto that increase in causal power as long as the external conditions permit it.

Some in the commentary literature hold the view that the conatus is in a deep way

expansive.[148] I take this to mean that the conatus of a living thing is such that it is *internally* directed towards more reality or optimization. The reason why I'm addressing this type of interpretation is that I believe it threatens that the causal intelligibility of conative behavior through efficient causes, since it requires that there is always an internal, self-directed effort towards more perfection. It is easier to understand a connection between the physiology as a system of motive tendencies and its conative behavior if that conative behavior depends on occurrent changes, and not on an internal tendency that is universally present during the life of the living thing. My intention is to reduce the temptation of reading the conatus as an appetite towards perfection or an appetite towards existence.

According to that interpretation of Spinoza's conatus as internally expansive tendency, there is an active effort in the organism to be more capable and exert its causal efficacy more fully than in the present. Schrijvers compares[149] that tendency to the elastic tendency of a wound spring when it is held compressed by external forces. If the external factors are held constant, then the living body maintains a static state. For example, a tree in the forest must compete for light and nutrients with other plants. This "pressure" from the environment forces the tree to maintain its current foliage because there is nothing to be gained from growing wide branches in a dense and shadowy forest. However, when some of those external pressures are removed the conatus springs into action. If an older

[148] See, for instance, Schrijvers (1999), p. 69, Carriero (2017), p. 168, and Koistinen (2014), p. 227.

[149] See Schrijvers (1999), p. 69.

tree dies and reveals an opening in the canopy of the forest, a younger tree tends to grow its foliage to obtain the sunlight that is available through in that gap.

While this view of livings beings as essentially expansive is better than the merely negative notion of being non-self-destructive, Schrijvers' interpretation has a difficulty of explaining what it is for conative beings to follow a path of positive stimuli, say, a nutrient gradient. Suppose that a simple organism, such as an amoeba, forages food in its environment by sensing the highest density of food and keep eating in the direction of the highest encountered density. This is difficult to explain within Schrijvers' interpretation since there is no absence or removal external pressures involved when the organism strives in holding onto the highest available level of causal power. Schrijvers' description would work only through a negative abstraction that the absence of nutrition in some region is *as if* an external pressure. But the lack of nutrition is not real, positive feature of the environment.

Therefore, what needs to be amended in Schrijvers' explanation is that there is a positive, intelligible causal mechanism of why the organism holds onto the highest nutrient stimulus. Arguably, that tendency to perfection and increase in power requires a suitable external source that affects the body. Next, I will discuss the cognitive conatus and how it depends on the physiological conatus.

The ulterior motive I had in criticizing the internally directed interpretations of conatus will become clearer when I discuss what feelings and mental appetites are. The point will be that also the mind's cognitive conatus depends on external sources of information, which corresponds to the way in which the physiological striving does not

just depend on an internal directive.

4.3 Cognitive Conatus and the Mind as a Self-Regulative, Complex Idea

A more difficult question is to establish what the conatus of the mind is. The difficulty at issue is that the cognitive conatus must be at the same time be one and the same as the physiological one, but also different. Let me explain.

I started this chapter by quoting Spinoza's thesis that the mental decision, and the bodily appetite and physiological state one and the same thing. The sameness of cognitive and physiological conatuses is also indicated by the following passage:

> When this conatus is related to the mind alone, it is called Will; when it is related to mind and body together, it is called Appetite, which is therefore nothing else but man's essence, from the nature of which there necessarily follow those things that tend to his preservation, and which man is thus determined to perform.[150]

Now, the conatus of the mind must also be different from the bodily conatus because the operative principle of understanding is different from the physiological one. The difference between the cognitive and physiological conatuses is that there are two different kinds of determination, i.e. necessary connection between cause and effect. The physiological conatus consists of a complex, self-regulative system of motive tendencies.[151] That physiological tendency drives or determines the change from a bodily state to a next

[150] See 3p9s.

[151] In later natural philosophy they might be replaced by forces. The role they play is the same.

one.

In contrast, the mental conatus must be cognitive. Spinoza believes that the only power of the mind is understanding.[152] In Spinoza's cognitive model view, the mind is driven forward from thought to thought by understanding. The causal principle behind the cognitive conatus is causal understanding. Ideas in the mind are formed because there is some understanding of *how and why* things happen as they do—not because it is *moved* by some inclination or motive tendency. What determines the mind to form an idea of A from an idea of B is that there is an understanding of the causal mechanism that connects the subject matters of those ideas.

One can think of understanding as a kind of cognitive resource or currency for forming ideas. Since the mind is an understanding of the causal structure of its body, the human mind has intrinsic cognitive resources for forming ideas which involve the causal mechanisms of the human body.

However, the human mind is not the sole cause of forming its ideas. Its innate cognitive resources are very much finite because it is not a cognitive model of the nature of other bodies.

Despite its limitation, the mind is determined to understand and form ideas as far as its present cognitive resources allow. One might wonder why the mind is internally determined to understand things. Spinoza's answer would be that there is no further inclination or reason behind why the mind does so. The mind just does that. The

[152] One could ask why Spinoza believes that the only power of the mind is the intellect. What is certain is that this belief assisted him in discovering his solution to Descartes' mind-body problem.

determination to think and deduce new ideas is the basic tendency inherent in the mind. For that reason, a mind does not hold back its cognitive resources.

Now that we understand how the cognitive conatus differs from the physiological conatus, we can explain why they are also the same. They are one and the same because the mind is a cognitive model of its body. Because Spinoza maintains that the mind's only power is understanding, the cognitive "force" that drives the mind forward is in agreement with the nature of its body.[153]

The cognitive model of the body is driven forward by the cognitive resources of its understanding. So, the only necessity that "moves" the mind from thought to thought is to that of a truth-preserving understanding. Because the mind's only power is understanding, there is no other mental "force" or inclination that would incline the mind into a path of action that is independent of what its body is doing and undergoing. That rules out the Cartesian solution that the mind has a conatus independent of its body. Because Spinoza's mind is a cognitive model of its body, it is not an agent who has a separate power of determining itself independently of the human body. Therefore, Spinoza's solution is not the two-agent view of the mind-body union.

Whereas the body consists of physiological activity, the mind consists in cognitive activity. On the one hand, that cognitive activity expresses the life of the body which is its object. That is the sameness between the conatuses.

On the other hand, the mind also has a real activity that is not derivative of its

[153] This issue will be discussed more in the final section of this chapter.

body. The mind has to form and understand the things that happen to and derive from its bodily condition. The mind cannot just wait that ideas come to it. It is up to the mind's active power that it forms ideas that further its understanding.

I will try to explain in the rest of the chapter that even though Spinoza's mind is not a separate agent from its body, it actively strives from its present cognitive resources to think through the life of its body. The ideas that it forms are genuine solutions to the cognitive challenges that the mind faces due its intellectual point of view in the human body.[154]

4.3.1 Cognitive Self-Regulation

Even when it comes to life, feelings and desire, Spinoza holds onto his view of the mind as purely cognitive. Because the mind is a cognitive model of the causal structure of its body, the cognitive conatus is the same thing as physiological conatus. As I will soon explain,

[154] This same agreement of power is also present in Spinoza's God. As Spinoza says, God's power of understanding and God's power of physical generation are equal to one another. See 2p4. According to Spinoza, God did not generate the physical order of Nature by first thinking it. But also, God did not come to think of the physical order of Nature by studying it as a pre-existing object. God formed ideas of the physical order because had infinite cognitive resources for forming an idea of his own nature. Part of that Divine nature is the causal principle of physical generation from the cosmic structure of physical Nature follows. Spinoza thinks that God has real agency in virtue of understanding, not because God is capable of arbitrary, ex nihilo creation. Even though the physical order of things follows merely from material principles that are part of God's nature, there is a separate matter of *understanding why* physical things exist in Nature as they do. Even though God has infinite cognitive resources for thinking, that does not remove the need for finite minds either. Each finite mind carries on a local task of understanding the world from their limited cognitive viewpoint. That viewpoint is what the human mind is. I believe that the above is a partial answer to the worries about the agreement between ideas and their physical objects that lead some scholars to adopt the so-called neutral modal order hypothesis. According to that hypothesis, Spinoza thinks that there is some prior order of things and causes in God which gets realized in both mental and physical attributes. See, for instance, Bennett (1984), p. 141 and Della Rocca (1993), p. 197.

this will entail that the mind is an organism qua *cognition*. It consists of a self-regulative activity which is determined to preserve its *cognitive* resources.

On that basis, I explain in the following sections that the mind lives, feels and desires in virtue of being an understanding. Feelings, appetites and other life activities of the mind are cognitive changes of the body model.

The main notion of Chapter 3 was that the mind is a causal understanding of its physiology existing in real-time. That in turn meant that the mind's essential or basic activity is causal thinking. This emerges from two theses: The first is that the mind's task consists in solely understanding, namely the formation of true ideas. The second is that the idea of the body affirms the existence of the body—not unlike presupposing the nature of the body as its subject matter. The mind's basic activity is causal thinking precisely because its ur-object (or subject matter) is the nature of the organic body whose causal tendencies are structured to perpetuate and retain its power.

I suggest that the mind's causal thinking is enough to explain what the self-preservative, conative, feeling and appetitive activities of the mind are. But that causal thinking is only based on an original, constitutive understanding of the nature of its body. Consequently, there are no separate non-cognitive powers or inclinations that are needed to explain conatus, feeling or appetite, and broadly life in the mind. Spinoza's view of the mind is purely rationalistic: the mind *lives* in virtue of its cognitive power only, through its tendency of understanding.

Spinoza says that "the first thing that constitutes the active nature of a human

mind is nothing but the idea of a singular thing existing in act".[155] This passage means that the mind's causal thinking is always online. The mind is a *real-time* cognitive model of its body. The cognitive model's activity is the constant processing and thinking of what follows from the present understanding of the state of the body.

Because the causal structure of the body is organic, i.e. self-regulative, the mind's basic activities are inferences[156] of ideas of life-activities of the body. The body's causal structure necessarily tends to cause effects which are life-affirming. Therefore, the mind as a model necessarily infers the ideas of those effects from its intellectual affirmation of its existing body.[157]

The above helps to explain what Spinoza means by the claim that "the first and principal conatus of the mind is to affirm the existence of the body".[158] He is saying two important things in this statement.

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[155] See 2p11. This passage was discussed in detail in Section 3.3.1.

[156] I use the term "inference" rather broadly. The use of the term indicates that there is a truth preserving understanding that connects the cause idea and its effect idea. Under the notion of inferring I don't count just the performance which gives birth to some new idea. But also, the notion covers the intellectual preparatory work that gets one to the place of performance. That includes various kinds of intellectual operations of comparison, contrasting, affirming, negating, and extracting. Spinoza mentions these kinds of operations in 2p29s when he talks about the manner in which the intellect's operation is conditioned internally as opposed being merely receptive to sensory ideas.

[157] On those grounds we believe that that conatus is not a desire *for* or *towards* existence. Rather, the conatus is the presupposition of the existence of the body which just an aspect of the idea of the body. There are interpretations of Spinoza which argue that the conatus of the mind is a desire or an appetite for existence. For helpful representatives, see Yovel (1999), and also, Koistinen (2014), pp. 221 and 223. My hesitation in adopting those kinds of views that they introduce a non-cognitive force in the intellect. This would create a dualism within the Spinoza's account of the mind. If that were so, Spinoza would have to provide some explanation how that non-cognitive force or impulse interfaces with the cognitive power of the mind. Against that, Spinoza thinks that the power of understanding alone can solve problems of emotion and desire. (See 5p4s.)

[158] See 3p10s.

The first is that there is a prior conatus in the mind, i.e. that there is an ur-tendency in the mind. The second is that the intellectual affirmation of the body is that conatus.

The second thesis is what I have explained so far in this section. The intellectual affirmation of the body's existence is the cognitive model itself. The intellectual affirmation of the existing body is the ur-cognition from which the mind starts its causal thinking. Mind's other ideas (such as actions and perceptions) modes of that original affirmation, e.g. cognitions of bodily changes.

That in turn explains the first thesis: the intellectual affirmation of the body's existence is itself mind's self-regulative ur-tendency. That is because ideas formed by the human mind (perceptions and actions) are *conditioned* by the affirmation of the body's present existence. By conditioned, I mean that mind's thought formation must be understood through the presupposition that its physiological structure exists.

That means that the mind as being which understands cannot just confabulate its appetites and tendencies that relate to the body. Nor can the mind arbitrarily decide to stop caring about the internal stability of its cognitive structure.

The body model is constantly online, always inferring the ideas of life actions. Those ideas can always be truly inferred from the existence of the body, unless there is some idea which excludes the body's existence. Because the mind affirms the existence of the body *in the present,* it can always truthfully infer an action towards an *immediate* future performance of life activities. For instance, the mind always forms from its present state the idea of being nourished and breathing. The mind can do so because its internal

model of the bodily tendencies gives it present cognitive resources for doing so.

That does not mean that the future activity of breathing will in fact take place. It relies merely on the fact that the bodily life functions by their structure will cause a certain effect. The body model can truly form the idea of bodily *effort* to breathe and to be nourished from its affirmation of its body's nature. There might be as yet uncognized, external causal factors which interfere and block those bodily efforts. The possibility that there are intervening causal factors which block the behavioral expression of bodily tendencies does not make the idea of bodily *trying* false.

The idea of the body acts as a condition to all causal thinking that the mind does. The affirmation of the existence of the causal structure generates an indispensable core structure to the mind's cognitive activity, because certain thoughts cannot be relinquished without making the idea of the body false or invalidating what necessarily follows from the nature of the body.

The mind as the cognitive model of its body cannot form an idea of an action which makes the ideas of future life-actions false or untenable. Those contra-life ideas would contradict, and hence destroy, the original affirmation of the existence of the body. The ideas which affirm the physiology are as it were "life thoughts" of the mind.

4.3.2 Appetites as Modes of the Ur-Conatus of the Mind

Now I will try to explain how Spinoza's view that the mind is an idea entails that the appetites, desires, urges, and volitions are cognitive states.

We should note here that Spinoza thinks that appetites are determinations to act. What that means is that appetites, desires etc. are local expressions of the self-regulative tendency of an organic being as a whole. For example, the appetite of an amoeba to consume plankton is merely a local orientation of its systemic tendencies.[159]

In the previous section, I argued that not only is the mind a cognitive model of its self-regulative body, but that the mind as an idea is self-regulative qua its internal cognitive structure. The mind's status as a living thing consists in its affirmation of the present existence of the body. As long as that intellectual presupposition exists in the mind, the body model is constantly performing causal inference on what follows from that presupposition. Whereas the physiological system is determined to perform its self-regulative life-activities, the cognitive system is determined to infer ideas which preserve and support the *veridicality* of the affirmation of the existence of the body.

The appetites and desires of the cognitive system are particular causal inferences which the cognitive model of the body is determined to form. So, appetites and desires are distinct from the cognitive conatus only insofar they are local manifestations of the global, self-sustaining cognitive structure of the mind.

Since the mind's thinking activity is regulated by its understanding of the living body, there is no distinction between the mind's real-time causal inference and mental appetites that tend to preserve the mind's existence. To put it in another way: the mind is a cognitive organism which is internally determined to preserve its existence. That

[159] See Spinoza 3p57d.

preservation of existence is successful exactly when the mind is able to affirm the existence of its body.

Consider the example we discussed in Chapter 3 to motivate Spinoza's view. When the physiological system is undergoing dehydration, its cognitive model is simultaneously updated with an idea of dehydration. Why does the cognitive model perceive the idea of dehydration? The bodily system is internally sensitive to the state of dehydration, because it inhibits the body's overall causal structure. Since the body model is an understanding of that overarching, systemic causal structure, it forms the idea of the dehydration. Because the body model's ur-tendency is to affirm the existence of the body, and the idea of dehydration is contrary to the ur-tendency, the body model is determined to form an idea of drinking. That cognitive determination of the body model consists in that it understands what future cognitive state (or idea) *must follow* when the self-regulative bodily system is dehydrated.

One way to think about this is as follows: The mind consists of a single thought "this self-regulative body exists". The mind exists as long as the presuppositive judgment "the human body exists" is true.[160] If it happens that the presupposition cannot anymore be understood to be true, the mind as an idea ceases to exist. In this sense, the mind is alive precisely because it is a constant cognition of the human body existing in real-time.

[160] I use here a shorthand that involves the language of propositions and judgment. The more proper way of thinking about this that there is a causal understanding of the body which includes an intellectual affirmation of existence. I'm using propositions and judgments as aids for the reader to get onto the view that I think Spinoza has. The reason why verbal propositions are only faint approximations of understanding is that they are not causally rich enough. See Section 3.2 for further detail.

Let us compare our interpretation to what Spinoza says:

> "The essence of the mind is constituted by adequate and inadequate ideas [...] So it strives to persevere in its being both insofar as it has inadequate ideas and insofar as it has adequate ideas. (*The Ethics*, 3p9d)

When Spinoza says that "inadequate and adequate ideas *constitute* the essence of the mind", he is talking about the ways in which the cognitive model is updated by sense perceptions (i.e. inadequate ideas) and more sophisticated rational understanding (i.e. adequate).

What does Spinoza mean when he says that the mind "strives to persevere in its being" both when it has adequate and inadequate ideas?

There Spinoza explains how cognitive states of the mind (i.e. thoughts and perceptions) contribute downstream to cognitive self-regulation. The mind's essential cognitive structure consists of the intellectual affirmation of the living body. When the mind perceives something via senses, that perception updates the intellectual affirmation of the bodily tendencies. A perception of a glass of water, for instance, is synthesized by understanding with the affirmation of the living body. From that new updated understanding, the mind causally infers the idea of act of drinking.

By that mediation of the affirmation of the living body, a mere dispassionate perception of a glass of water turns into a passionate appetite for drinking water. The crucial thing is that all this happens through the mind's tendency to understand, i.e. forming true ideas. The perception of the glass of water is a cognitive resource that enables the mind to form a true idea of bodily tendency to eat. The perception of a glass

water is a cognitive catalyst for truth-preserving, causal inference.

The body model's causal thinking can be equally well catalyzed via the possession of reflective, adequate understanding of bodily changes, as long as those thoughts explicate the actual state of the body.[161] Through that reflection, the body model understands clearly the necessity of, say, drinking water, and is similarly determined to form the idea of drinking.

Let us look at the rest of 3p9 to find more textual support for our interpretation of what appetites are:

> "When this striving is related only to the mind, it is called will; but when it is related to the mind and body together, it is called appetite. This appetite, therefore, is nothing but the very essence of man, from whose nature there necessarily follow those things that promote his preservation. And so, man is determined to those things." (*The Ethics*, 3p9d)

This passage continues the same line of thought, except that it adds that the mind's understanding of the body determines the mind to form ideas of activities that sustain and support the body's life. That is because the mind's basic structure is a rich causal understanding of a living body. That very idea itself carries a lot of causal content that determines the mind to draw further consequences from it.

That cognitive determination just is the mental appetite. When the perception of a

[161] I don't have much to say about in this dissertation about what is practical reasoning in Spinoza' philosophy, since there is enough to discuss about the lower cognitive powers. It is not clear to me yet how exactly practical reasoning is efficacious according to Spinoza, but there is strong evidence that it is. The bare minimum seems to be that practical reasoning is efficacious through an affective dimension. In order for the mind to reason in a way that changes the conative direction it must kindle some kind of conative tendency. This is an interesting question for further research. For more about this topic, see 4p1, 4p7, 4p18 and 4p26.

glass of water leads the mind into forming the idea of act of drinking, the mind bridges a connection between those ideas merely via its tendency to understand. Mental appetites consist in that the mind is *determined and bound by its intrinsic operation of understanding*. This identification of appetite and cognitive determination is valid only because the mind's basic structure is a cognitive model of this living body.

Before we go on to the next topic, I want to add a pointer back to the problem whether the mind is a mere passive observer of its body. The mind is not operating from a detached, observational viewpoint in relation to the body. The body model is not trying to answer a theoretical question of what the body *would* do in a given circumstance. Rather, the mind is regulating its own cognitive power which is tethered to its original affirmation of the living body. The mind essence is a cognitive self-regulation, namely an intellectual presupposition of its body's existence. Consequently, the mind has an *existential stake* in its activity of understanding.

In the next section, we talk about how the mind can lose its existential stake to external circumstances.

4.3.3 Cognitive Death

Spinoza thinks that the mind is a cognitive structure, a complex idea. Therefore, the death of the mind consists in that idea going out of existence. The nature of an idea is to be an adequate cognitive expression of the nature of its object. An idea ceases to exist when there is no existent subject matter which to express. A finite mind is an intellectual

affirmation of a subject matter that does not exist necessarily. The mind does not consist in a *self-evident* inference that its body exists. On the contrary, I said in Section 3.3.1 that the cognitive model of the body *presupposes* the existence of its body. In Spinoza's view, then, the so-called *givenness* of its body is an intellectual givenness. The body model acts and feels by drawing on its innate understanding of how the body operates, and in doing that it has to first affirm that there is a body. But because the affirmation of existence is not self-evident or necessary, it can be shown to be untenable by external cognitive factors.

Spinoza says that the mind does not cease to affirm the body's existence because the body's death *causes* it. This is because the mind's relation to the body is not receptive or communicative. The mind and the body do not exchange signals with one another, because that would mean that there is some Cartesian third factor that grounds the signaling between the thinking thing and the bodily automaton. So, the death of the mind does not consist in the cessation of sensory information from the body, or that the body would send a final message of death to the mind.

Note that the nature of the mind is to be intellectual affirmation of its body. I characterized this affirmation so that the mind as an act of understanding presupposes its subject matter. The affirmation is a presupposition in the sense that the mind does *not* receptively learn that its body exists. On the contrary, the relationship between the affirmation of an existing body and the mind is *constitutive*. Because the mind cannot acquire that constitutive aspect, the mind carries on the same original affirmation of its body until that affirmation cannot be retained anymore.

The body model as if recreates itself continually through time by forming ideas which support the existence of its body. That affirmation of existence continues unless the mind receives a new, contrary *idea* which as it were takes away the mind's cognitive resources for affirming the existence of the body in the next moment.

Now, the idea of which excludes the existence of the human body cannot be formed by the mind itself. This is because the mind is an idea of an organic, self-regulating body. In the previous section, I talked about how the mind is constantly inferring ideas of live activities of its body. The mind's causal thinking is always conditioned by a rich array of ideas that are of the activities are necessary for the persistence of its body. I suggest that this means that the mind's primitive, baseline activity consists of ideas of breathing, metabolism, nutrition and other automatic and instinctual mechanisms of survival. The body model cannot infer any idea of the body's immediate future state which is contrary to those ideas. means that if it is not shown to the contrary by information that the mind receives, the mind will continue to affirm the existence of its body.

The body model itself cannot form the idea which results in the cognitive death. It must come from outside the body model. This *cognitive* state of affairs corresponds to how the self-regulative human body does not die due its physiological tendencies.[162] Provided that the mind is a veridical model of the operation of the body, i.e. an

[162] This is an assumption by Spinoza. He did not think that biological death could be caused by a mechanism that is internal to a living thing. Senescence, for instance, is caused by the wear and tear induced by external causes.

understanding, its causal thinking cannot in a truth preserving manner form ideas which require that the body's mechanisms destroy themselves. Abstractly speaking, that possibility would be analogous in its form to inferring the truth of not-P from the truth of P, which is impossible.[163]

On these grounds, Spinoza thinks that the cognitive death must be due to some external idea which blocks the affirmation of the body's existence. By external to the mind, Spinoza means an idea which does not belong to or follow from the innate cognitive model of the body.

Now, Spinoza says that the external idea which causes the death of the mind cannot be *in* the mind. This sounds peculiar considering that if I'm about to be hit by a car, I can sometimes quite clearly see the car that is barreling towards me.

However, that is not what Spinoza is thinking. The point is that the event of death is not that the mind learns some positive piece of information about the cause of the body's death and synthesizes with its internal understanding of its body. Rather, the process of dying for the mind is a *depletion* of its basic and constitutive cognitive resources—as it were a blackout of the body model.

Let me first explain the situation through the physiological side of things. The

[163] The possibility of suicide generates here an interesting philosophical problem. Normally, philosophers have argued that suicide is morally wrong. In Spinoza's view, the very nature and possibility of a suicide is problematic. See 4p20s. A skeptic of Spinoza's view on psychology could say that finally we find something empirical that invalidates his views, since clearly humans make decisions to end their own lives and do so knowingly. As I see it, the issue is not that simple. Spinoza thinks that only a sufficiently complex mind with imagination and reasoning capabilities is capable of suicide. Spinoza's theory of the mind tries to capture the way in which low-level, primitive life tendencies are impossible or at least hard to override without working around or even deceiving those tendencies. I leave the topic of suicide for further research.

body's life activities are being critically disturbed by the impact with the car. Since those life activities are at a more fundamental level a complex arrangement of motive tendencies, their disturbance leads to finally to the destruction of the very causal structure of the body. The body loses its biological stability and ceases to exist as a being.

The mind of that dying body is constantly performing causal thinking of the life activities of the body. Simultaneously, the body model is updated with ideas of damage to the body. Those ideas of bodily damage dwindle the cognitive resources that the mind has for causal modeling of its body. The mental death occurs when the body model has reached a state that it cannot veridically infer the ideas of life activities at all. The death of the mind is then an absolute ignorance where the mind has no understanding of what is happening in its body. The mind has become a model of a body which does not anymore exist due to its coherence and stability being destroyed. The act of understanding that constitutes the body model has no existent subject matter. One way to put is that since the mind is a true idea of its object, its death happens when the mind has become a true idea of nothing.[164]

[164] This is in the durational sense. Because the mind is a real-time cognitive model of its body, it has no present subject matter. Spinoza reserves another sense in which the mind is in an eternal sense a model of the nature of its body. That paves the way for Spinoza's difficult discussion of the eternity of the mind, which I leave for later investigation. I will say this much: The eternal part of the mind is that the mind is not only an affirmation of the bodily operation in time but also that the mind is an affirmation of some eternal causal invariances that act in time producing and sustaining bodily causal structure. For more about this see Ethics 5p29.

4.4 Feelings as Changes in Cognitive Power

Affects in Spinoza's philosophy of mind have a dual status. First, an affect is a cognition of a bodily change (such that it helps or disrupts the life-functions of the body), or more generally, any kind of appetitive determination to some action.[165] Second, they are also changes in the cognitive power of the mind, or power of thinking, as Spinoza calls it.

If affects were only merely dispassionate observations that something is happening to the body, Spinoza would not have succeeded in providing a view of an active mind that in the full sense *lives* the life of its body.

But Spinoza has an account of what it is for the mind to feel changes in *itself.* This feeling consists in that the mind's self-regulative cognitive tendency, is doing better or worse.[166]

We have argued that Spinoza sees the mind as a cognitive model of the nature of its body. One could come to wonder why exactly a cognitive model could ever be better or worse. This point reflects back to the previous sections concerning cognitive self-regulation and mental appetites. There we explained that the mind's life consists in a cognitive determination. That cognitive determination is basically that the cognitive model of the body retains the affirmation of the existence of a living body. Individual appetites are causal inferences which the mind draws from that original affirmation.

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[165] "By affect, I understand affections of the body by which the body's power of acting is increased or diminished, aided or restrained, and at the same time, the ideas of those affections." See *the Ethics*, 3d3.

[166] I do not refer by "feeling" to any phenomenological quality of what it feels like to, say, sense heat or cold. What those qualities are not basic explanatory units in Spinoza's conception of the mind. However, that is not to say that Spinoza's view does not have any phenomenological character.

To get to the correct understanding of Spinoza, let us look at the following piece of text:

> […]because the essence of the mind consists in this that it affirms the actual existence of its body, and we understand by perfection the very essence of the thing, it follows that the mind passes to a greater or lesser perfection when it happens that it affirms of its body (or some part of the body) something which involves more or less reality than before. So *when I said above that the mind's power of thinking is increased or diminished, I meant nothing but that the mind has formed of its body (or of some part of it) an idea which expresses more or less reality than it had affirmed of the body.*[167]

Spinoza is saying here a couple of things we have already explained but it is good to see how things hang together.

First, Spinoza says that the mind's nature consists in affirming the actual existence of its body which we translate that the mind is a real-time cognitive model of its body.

Second, he talks about perfection which is a term of trade meaning the capacities which the thing exercises as part of its life activity. The mind's "perfection" is its understanding, whose structure is given by the affirmative understanding of its existing body. The affirmation of the existing physiological tendencies fixes the mind's cognitive task to a particular object, its body.

That is why the mind's cognitive power is increased when its affirmation of the body's state changes. For instance, when the body is badly burned, the mind is affected with an idea of that bodily damage. That idea of bodily damage affirms less causal power of the mind's object, which means that the mind is less able to do causal thinking of what

[167] See *the Ethics,* Part 3, General Definition of Affects.

its body is capable of doing than before. In a word, the body model has less cognitive resources than before.

That reduction of cognitive resources has consequences downstream. The mind in a such state cannot veridically infer ideas of bodily actions, such as, idea of playing violin. Why? A badly burned human body is internally directed towards putting all its bodily resources into healing the body and returning it to full functionality. The state of the body does not have enough physiological resources to generate the action of playing violin.

How does the idea of the bodily change make an impact on the conatus of the mind? As we explained earlier, the cognitive conatus is the cognitive determination that proceeds from the affirmation of body's existence. The body model operates with the presupposed existence of the body as its cognitive principle. When Spinoza says that *the mind has formed an idea of its body that expresses more or less reality than before*, he means that the mind has updated the affirmation of its physiological conatus with the new idea of bodily change.

The affirmation of the existing physiological tendencies is not left untouched that cognitive change. That idea of bodily change can be contrary to the ideas of life-activities that follow from the mind's basic causal understanding of its body. In other words, that idea disturbs and inhibits the basic cognitive resources that form the mind's self-regulative structure.

This can help to explain that the mind is not just making a dispassionate observation about the state of its body. If the mind was just an observer of its body, we

could compare the idea of the body to a mere tool of understanding. In that case, the mind as a thinking thing would be saddened because its intellectual view through its bodily "telescope" is blocked by the disturbances in the body's life functions. This would make feelings in the mind only indirectly related to the body's state: The mind's saddening only relates to its universal understanding of anything whatsoever. In that scenario, the body would be only a contingent medium of achieving that goal.

The above metaphor of the body as an intellectual "telescope" would be true if the mind would be an agent whose nature is separate from the idea of the body.

That is one of the reasons behind Spinoza's thesis that the mind itself *is* a cognitive structure which internally expresses the nature of its body. Because the mind's cognitive resources are essentially tied to its particular bodily viewpoint, the ideas of bodily changes directly affect the mind's cognitive structure by limiting the range of the body model's causal thinking. That is why the mind's changes in cognitive power are the same as when things are going poorly or well for the mind. In other words, the mind's feeling is directly or immediately related to the state of its body. [168]

The worry that the mind as a cognitive model is merely dispassionately observing its body is not quite yet defused. We have been talking about the mind's causal thinking as truth preserving inference. Suppose that the mind was to only infer between

[168] Spinoza writes about the increase and decrease of cognitive power as follows: "[…] in proportion as a body is more capable than others of doing many things at once, or being acted on in many ways at once, so its mind is more capable than others of perceiving many things at once. And in proportion as the actions of a body depend more on itself alone, and as other bodies concur with it less in acting, so its mind is more capable of understanding distinctly." *The Ethics*, 2p13s.

perceptions about the state of its body by following some *analytical or symbolic model* that performs logical operations to proceed to the state of the body. The worry is then that Spinoza's mind is nothing but an analytical engine, or a calculator, who merely pushes around symbols which refer to the physiological tendencies of its body.

The crux of the worry is that analytical or mechanical inference is performed equally successfully whether the human body is dying or flourishing. In that case it would be true that the human is an unfeeling observer since it is activity and power are not expressions of what is happening in its body. The mind would be more like a thermometer of its body, a model in the sense that it correctly predicts and measures the state of its body.

Spinoza's conception of the mind differs greatly from an analytical engine, because an act of understanding is a synthetic, ampliative cognition. By that I mean, that when the body model "infers" it has to generate understanding which its internal resources do already contain.

A mechanical calculator already has all its possible numerical outputs built into its internal structure. When the user inputs a calculation command by pressing on the buttons and turning the crank of the calculator, she is merely accessing as if a preset database of results, crafted into the machine's structure by its designer.

When I said that the activity of the mind consists in causal inference, the point was emphatically not that the mind is accessing a library of pre-made ideas about the state of its body. To put the point differently, it is not Spinoza's intention that the idea of the body is a comprehensive collection of ideas of what its body is going to do. The mind

is not driven forward by a pre-determined series of ideas of future bodily actions or states.

On the contrary, the body model is only an understanding of what the invariant operation of the body is, not an understanding of what is going to happen to the body. By its basic cognitive structure (or essence), the mind has no understanding of the state of the body, because that understanding cannot be generated or inferred from the existence of the invariant operations of the body.

Spinoza specifically says that an affect is "a confused idea, by which the mind affirms of its body, or some part of it, a greater or lesser force of existing than before."[169] The term "confused idea" means that it is a cognition that does not depend on the mind's internal cognitive resources. This means that the ideas of bodily changes either add something to the mind's cognitive power or reduces it.

Even if the idea of the body does not consist of pre-packaged predictions of everything that happens to the body, one could perhaps continue with a similar line of objection: When the mind acquires an idea of bodily change, the mind infers the idea of a bodily response analytically from an enlarged collection of truths which now also include a cognition of the new state of its body. In this case, then, the mind would be still an analytical machine, albeit a real-time one.

That interpretation at least cannot be Spinoza's view, because it requires that each idea of bodily change is an *additional* piece of information that enlarges the mind's cognitive power. For instance, when my body is badly burned, the idea of that bodily

[169] See *the Ethics*, Part 3, Gen. Def. of Affects

change differs from the idea of bodily empowerment only as two symbols differ from one another. If that were the case, then the mind would be treating bodily suffering and bodily empowerment equally as mere symbols that refer respectively to a certain bodily change.

On the contrary, Spinoza thinks that when the body's functions are disturbed and its physiological conatus weakened, the mind's power of thinking is decreased. Since the mind consists of only ideas, that must mean that the mind understands less, that is, has less cognitive control over its relation to other things. On the other hand, when the body's functions are optimized and its capabilities are strengthened, the mind's power of thinking is increased. The point is that ideas of bodily changes do not change the state of the mind equally.[170]

The very idea that there are cognitive changes in the mind that weaken the mind and take away its cognitive power should take us away from the presumption that Spinoza thinks of ideas as being referential or symbolic.

The reason why the calculator reading of Spinoza's view of the mind is so tempting is that we think that being a *model* of the body must mean that it already contains all the information about its object, waiting for a proper moment to manifest itself.

On the contrary, it is more proper to think of the idea of the body as a starting point or a point of view which is inseparable from the cognitive tendency of the mind.

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[170] See 3p11s.

From that point of origin, the intellect engages in constructive or synthetic thinking, that is, understanding.[171] The task of the mind is to understand, as far as it can from its given cognitive resources. Even though the mind is an understanding of how its body operates, it does not thereby understand every relation of the body's nature to other things. That understanding can be increased and decreased, and the mind does so by a sort of synthesis where the original, invariant understanding of its body is combined with new information about bodily changes. The understanding of the body is a starting point for understanding of what happens to the body but does not provide the full instructions.

[171] Carriero (2016) explains understanding to be something like a construction procedure that generates the nature of the object of cognition. He uses examples from constructive geometrical demonstrations where clearly something new is learned.

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